NATIONAL PETROLEUM NEWS

Movement for Code of Marketing Ethics Gathers More Impetus

CLEVELAND, May 28

IT APPEARS likely a national standard of marketing policies may come about, through several movements now under way to eliminate from gasoline and motor oil jobbing and retailing unprofitable practices which have resulted from the scramble for gallonage in the last few years.

These several movements briefly are:

1 The executive committee of the American Petroleum Institute May 23 indorsed in principle the idea of a code of ethics governing the marketing of petroleum products. A committee was appointed to decide whether a code should be national or regional, and consider other phases of the idea for standardized marketing practices.

2 Representatives of the major marketing companies in Ohio have held three conferences with directors of the Ohio Petroleum Marketers Association and have approved generally a code which about 500 Ohio marketers have signed. The signatories include most of the larger companies.

June 1 has been tentatively set as the day the Ohio code will become operative, although all provisions will not go into effect in all localities at once, because of some local conditions which must be worked out.

3 Colorado distributors put in force May 10 a code which is intended to end the unprofitable practices which are the same in Colorado as in the rest of the country.

4 Thirty-six small companies in Virginia have signed the Virginia code[1] which has been approved by the Federal Trade Commission, but none of the large companies that participated in the conferences that led to the drafting of the Virginia code, had signed it up to May 25.

5 Mississippi by legislation has made it an offense, punishable by fine and imprisonment, to grant rebates, discounts or concessions which tend to hinder, prevent or destroy competition.[2]

6 The Standard Oil Co. of Kentucky did much to clarify the price situation in its territory with this price policy: Service station price shall be 2 cents above a basic tank wagon price; legitimate resale dealers or jobbers are to receive a discount of 2 cents from the basic tank wagon price; farmers are to pay the basic tank wagon price; large commercial accounts buying at the service station pay 1 cent a gallon more than the tank wagon price, and when buying from the tank wagon they pay the basic tank wagon price.

This policy was put into effect in Florida, Georgia, Alabama and Mississippi April 2 and in Kentucky April 26.

The main difference between the Ohio and Virginia codes is that free installation of underground equipment is condemned in the Ohio code but allowed in the Virginia code. The Ohio code provides that the dealer shall pay the full price of all underground equipment and only gasoline pumps and motor oil equipment shall be loaned or leased the dealer.

The dealer must carry the loaning or leasing company's trade-mark, emblem, brand or name on a conspicuous part, and no other supplier shall deliver gasoline or oil into another supplier's tanks. These features are covered in sections (b) and (c) of Rule 1 of the Ohio code, published herewith.

The Ohio code also strikes at trade pullers in the last clause of Rule 8 concerning gifts and bonuses. This clause reads, "nor shall other types of merchandise be sold below regular recognized prices."

W. A. Milne, secretary of the Ohio Petroleum Marketers Association, is sending his members a letter this week in which he explains that some of the worst practices which have sprung up in the warfare for gallonage will be eliminated as soon as the code goes into effect, probably June 1. Directors of the association and officers of some of the large oil companies realize that, in some localities, there will be delay in getting all the provisions into operations, but it is expected substitution of good practices for what are generally recognized as bad practices, will be gradual until cut throat competition is eliminated.

The campaign for a code of marketing ethics in Ohio has been rapid. It developed after the Federal Trade Commission announced March 20 its 12 rules of good trade practices for the Virginia marketers. Conferences were arranged with the major companies and, after the second meeting, a code was circulated among the members of the association, most of whom immediately signed it. Secretary Milne appeared before the 14 petroleum clubs in the state in May pushing general adoption.

The third conference was held May 25 at Columbus. Only one of the major companies, it is understood, made reservations against the code. This company saw nothing wrong in an oil company paying for underground installations, as condemned in Rule 1, or the consigning of gasoline and oils to dealers, a practice condemned in Rule 3.

Although the practice of installing gasoline tanks and the necessary underground equipment has been upheld by high courts, a preponderant majority of the Ohio Independents believe free installation of underground equipment brings into the marketing division of the industry a great many undesirable dealers.

Elimination of free installation cannot be accomplished overnight, Ohio marketers realize, but they believe that adoption of the code will begin a movement that will result in a clearing of the Ohio market this year. Even representatives of companies that have been skeptical of codes of ethics say they will gladly follow any good standard practices that may be decided on.

The committee that was appointed at the Chicago convention of the A.P.I. last December to study the desirability of a market survey by the institute reported to the executive committee May 23 in favor of a survey, but the executive committee voted against it on the ground

1 Text in NATIONAL PETROLEUM NEWS, March 28, 1928, page 73.
2 NATIONAL PETROLEUM NEWS, May 9, 1928, page 23.

that the only possible accomplishments would be the determination of what should go into a code of ethics for the marketing division. A subcommittee composed of P. M. Miskell, Empire Oil & Refining Co., Tulsa; Amos L. Beaty, formerly of The Texas Corp., New York, and Axtel J. Byles, Tide Water Oil Co., New York, was appointed to decide what procedure the institute should follow, whether a national code or regional codes should be favored.

James A. Gilmore, secretary of the American Oil Men's Association, has asked that officers and directors of state associations which have voluntary regulation of marketing practices such as the efforts in Virginia, Colorado and Ohio, and those that have involuntary regulation, such as in Mississippi, discuss and help draft a general code of marketing practices at the association convention in Detroit in October.

It seems certain that a code of marketing ethics will come up before the A.P.I convention Dec. 4, 5 and 6 in Chicago. The sub-committee of which Mr. Miskell is chairman is expected to report shortly on its observations as to what is needed in a code.

The Virginia code has had a rocky career. Impetus was given the idea just a year ago by a conference at Richmond, over which presided Edgar A. McCulloch, member of the Federal Trade Commission. At that meeting were representatives of the Standard Oil Co. of New Jersey, The Texas Co., Atlantic Refining Co., and Tide Water Oil Co., besides those from the Virginia Independent Oil Men's Association and several Independent distributors.

A list as of May 25—just a year after the Richmond conference—of signatories to the Virginia code contains the following names not one of which is that of a major distributor in Virginia:

Albemarle Oil & Gas Co., Charlottesville; I. W. Bagwell, Onancock; Brickert Oil Co., Farmville; Brookneal Oil Co., Brookneal; Danville Oil Co. Inc., Danville; Delta Oil Co., Petersburg; W. B. Fulton, successor to Virginia Petroleum Co., Gate City; James River Oil Co. Inc., Richmond; Moir & Co., Stuart; Rich Creek Supply Co. Inc., Rich Creek; Southern Oil Co., Suffolk; Shenandoah Valley Oil Corp., Berryville; Topping Oil Co., Williamsburg; Wythe Oil Co., Wytheville; Wakefield Oil Co., Wakefield; H. C. Watson, Onley.

Hampton Oil & Supply Co., Hampton; J. M. Beaty Co., Wise; Castlewood Motor Co. Inc., St. Paul; Virginia Central Railway, Fredericksburg; York Tire Co., Hampton; J. F. Forsyth & Co., Front Royal; Orange Gas & Oil Co., Orange; Gordonsville Motor Co., Gordonsville; Rockbridge Motor Co. Inc., Lexington; J. T. Horton, Fredericksburg; Whiting Oil Co. Inc., Clifton Forge; Dotts Service Station, Chase City; Twin County Motor Co. Inc., Galax; The Elmwood, Roanoke; Dickenson, McNeer Co. Inc., St. Paul; Virginia Hot Springs Co., Hot Springs; Red Star Oil Co., Arrington; Caroline Oil Co., Milford; Valley Oil Co., Waynesboro, and Independent Oil Co., Appalachia.

Coming Meetings

Western Petroleum Refiners Association, technical division, Shreveport, June 4, 5.

American Petroleum Institute division of development and production engineering, Broadmoor Hotel, Colorado Springs, Colo., June 12, 13, 14, 15.

West Virigina Oil Marketers Association, Kanawha Hotel, Charleston, W. Va., June 14, 15.

American Oil Men's Association, Hotel Statler, Detroit, Mich., Oct. 16, 17, 18.

International Petroleum Exposition, Tulsa, Oct. 20 to 29.

Petroleum Refiners Division, National Association of Credit Men, Chicago, Nov. 4, 5, 6.

This is Ohio Code 500 Marketers Have Signed

GROUP I

Approved Practices

RULE 1—LOANING OR FURNISHING EQUIPMENT—

(a) Gasoline pumps and motor oil outfits may be loaned or leased for the exclusive storage and handling of the products of the lender. The borrower or lessee shall be required to pay the actual cost of installing said loaned equipment, and shall pay as, or when, due all privileged taxes attaching because of the installation or maintenance of such equipment.

(b) The dealer shall pay the full cost price for all underground equipment, and the installation thereof. Payments for tanks and installation costs shall be made within 30 days from date of completion.

(c) All above ground containers and dispensing equipment of motor fuels and petroleum products shall bear in a conspicuous place the firm name, brand, trade-mark or insignia of the owner, lessor or controller of such container or dispensing equipment, and no other refiner, distributor, jobber and/or wholesaler shall knowingly deliver into, or permit to pass through such container or dispensing equipment, any motor fuel or petroleum product other than that designated as being contained or passing through such containers or equipment or in any way be a party to the substitution of one grade, brand or class of petroleum products for another with or without intent to defraud or deceive the public.

(d) Wholesalers shall not construct for retailers any driveways, canopies, sheds, greasing pits, buildings, or other structures, do painting other than signs and dispensing equipment, make improvements to existing structures or facilities, nor furnish or loan air compressors, greasing lifts or racks or other things of value, except gasoline pumps and motor oil outfits, nor loan money for the same.

RULE 2—WHOLESALE PRICES—All refiners, distributors, jobbers, and wholesalers making tank wagon deliveries shall conspicuously post at each place from which such deliveries are made the price for motor fuels and burning oils delivered by tank wagon. All motor fuels and burning oils sold shall be sold at the posted price, except as provided in Clause 12 hereof. The wholesaler shall not allow nor grant any rebate, concession, or discount from the posted prices to any customer or class of customers on any ground.

RULE 3—CONSIGNMENTS, COMMISSIONS AND COMPENSATION TO DEALERS—Refiners, distributors, jobbers and/or wholesalers shall neither consign motor fuels and petroleum products to retail dealers for resale by said dealers, nor pay to retail dealers any commission or compensation for the sale of their products.

RULE 4—LEASES AND LICENSES—When refiners, distributors, jobbers and/or wholesalers acquire leases of service or filling stations, or service or filling station sites, such stations or sites shall not be subleased, nor the operation thereof licensed for a rental or charge less than that paid by such refiners, distributors, jobbers, or wholesalers, plus ten per cent per annum of the value of such improvements other than pumps, tanks and motor oil outfits placed thereon by such refiners, distributors, jobbers or wholesalers; provided, however, that when the value of the site for service station or filling station purposes has decreased below that existing when the lease was taken the rental charge therefor to the sublessee or licensee may be reduced proportionately to the decrease in the value of the site for service or filling station purposes.

RULE 5—INTERFERENCE WITH EXISTING CONTRACTS—Under existing laws it is illegal to interfere with existing contracts by inducing or attempting to induce a party to break an existing lawful contract and this fact is mentioned in this Code as a matter of information.

GROUP II

Expressions of the Trade

RULE 6—POSTING RETAIL PRICES—Operators of service stations, filling stations, curb pumps and bulk plants serving consumers shall post the prices at which motor fuels and motor oils are sold therefrom.

RULE 7—COUPON BOOKS—Coupon books, if used, shall be sold and redeemed at their face value.

RULE 8—GIFTS OR BONUSES—No oil or other thing of value shall be given away on opening days, special sale days or other occasions; nor shall other types of merchandise be sold below regular recognized prices.

RULE 9—LOTTERIES—Lotteries, prizes, wheels of fortune and/or other games of chance shall not be used in connection with the sales of gasoline or motor oils, nor at places where gasoline and motor oils are sold.

RULE 10—EQUIPMENT AND ADVERTISING RENTALS—Refiners, distributors, jobbers, and/or wholesalers shall not pay any rentals, nor give any other thing of value, for the privilege of installing pumps and tanks, nor for displaying advertising on premises where petroleum products are sold.

RULE 11—PURCHASE OR RENTAL OF EQUIPMENT—Refiners, distributors, jobbers and/or wholesalers shall not rent from any dealer or consumer any delivery equipment, and shall not purchase from any dealer or consumer any delivery equipment for more than its actual value.

RULE 12—BULK AT PLANT DELIVERIES—The practice of making deliveries of gasoline at wholesale plants into tank wagons or tank trucks operated by or for the purchasers thereof is discouraged. When such deliveries are made the price of the product shall be posted tank wagon prices less cost of handling by purchaser, provided, however, that the allowance to be deducted from the posted tank wagon price for handling by purchaser shall not exceed one (1c) cent per gallon.

Cause of Gas Lock and a Remedy is Found Through N. G. A. Research Work

By J. C. Chatfield
N. P. N. STAFF WRITER

TULSA, May 28

RESEARCH work of the Natural Gasoline Association this last year has revealed the conditions under which carburetors of motor vehicles' "gas lock," and a remedy for that condition.

Dr. George G. Brown, of the University of Michigan, head of the research department of the association, was on his feet more than four hours at the annual convention here May 22 and 23 reporting on his findings and answering questions of gasoline manufacturers and refiners.

Dr. Brown has discovered that excessive vaporizing of gasoline in the ducts of a carburetor will cause an insufficient amount of fuel to reach the manifold, cause missing and in some cases a complete stoppage of the motor and inability to start again. He has found that some vaporization in the bowl of the carburetor is desirable.

As a remedy for gas locking Dr. Brown offered a simple test for motor fuel. If the vapor pressure of any motor fuel does not exceed atmospheric pressure at the highest temperature reached by gasoline in the carburetor there will be no gas locking.

As motor cars are designed at the present time, Dr. Brown has found there will be no difficulty if the vapor pressure of gasoline at 130° F. does not exceed atmosphere or about 14 pounds per square inch on the average. The vapor pressure tests may be made with equal satisfaction by the Reid or Beistel-Prather methods.

The association will continue its research work next year, the board of directors decided at a meeting just after the convention closed. Dr. Brown will be asked to continue his work on the gas lock and perfect a means by which all necessary data regarding a gasoline may be obtained from the A. S. T. M. distillation curve. From this curve Dr. Brown believes it will be possible to predict accurately the vapor pressure of a gasoline and its effective volatility, which indicates actual motor performance by showing the quantity vaporized at any given temperature when mixed with air under the same conditions as in the motor itself.

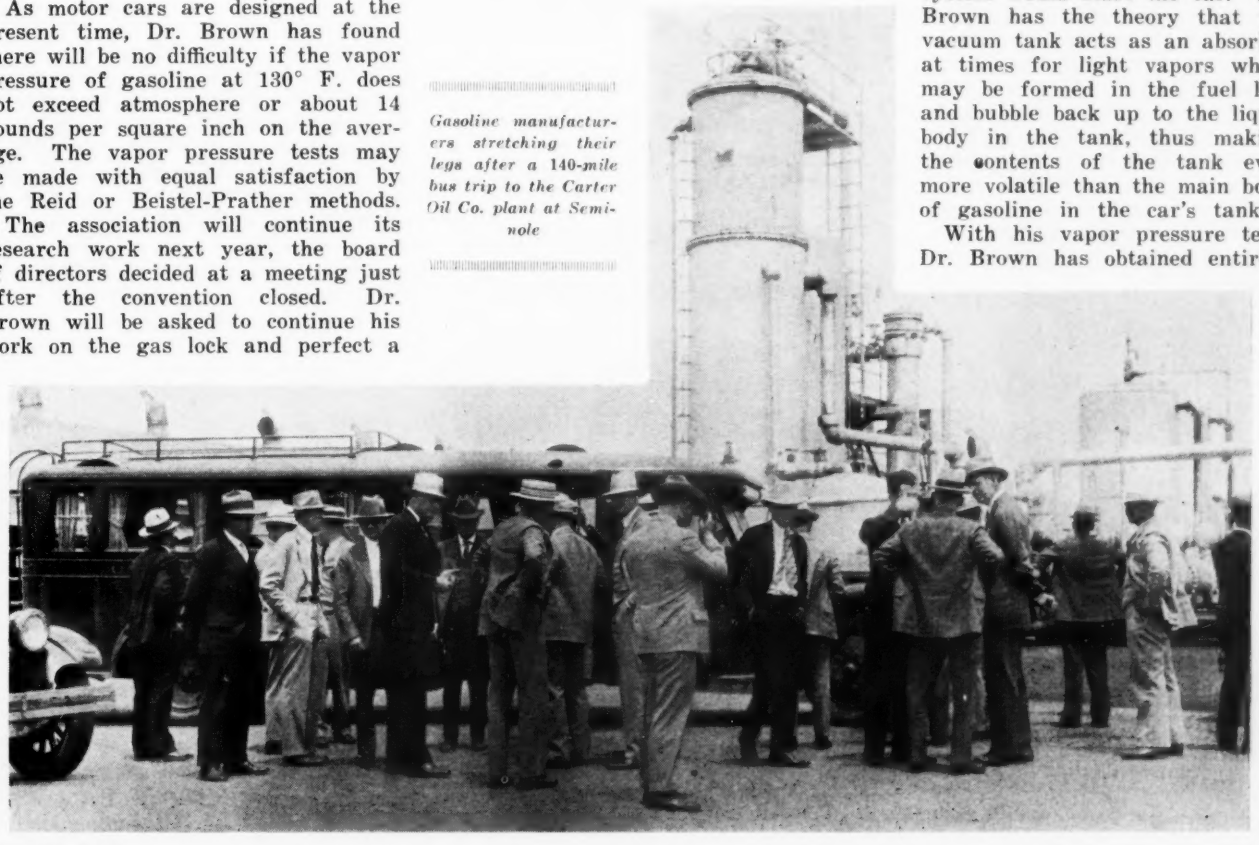
Motion pictures were exhibited at the convention showing how gasolines boil in the bowl of an automobile carburetor at times and cause trouble. At the University of Michigan laboratories a glass carburetor was built which could be heated to any desired temperature and permit the operator to observe what was going on inside. The pictures showed how increased heat at the carburetor caused boiling of gasoline in the bowl, the charging of gas bubbles into the jet and engine stoppage.

The theory had been advanced that the cause of the carburetor gas lock was dissolved fixed gas in motor fuel. It was known that straight cracked and straight run gasoline, with no natural gasoline included, has been found to contain various percentages of propane and butane which are vapors at ordinary temperatures.

To test out this theory Dr. Brown made a large number of runs under varying conditions in a specially equipped Lincoln car. Fuels of known percentages of propane, butane and pentane were tested but results showed no apparent rhyme or reason as to locking in the carburetor. Fuels of high dissolved gas content worked without difficulty at high carburetor temperatures, while fuels with no propane or butane content but with large amounts of pentane did cause the motor to stop and refuse to start again. These tests over long periods showed that the dissolved gas is not the cause of gas locking.

A theory was advanced that the vacuum tank on a motor car served as a vent for fixed gases and that less trouble would be experienced than with a pressure feed. Tests showed the contrary to be true. It was found that a car with a vacuum tank which had been stopped by a gas lock would not start again, while the same fuel through a pressure feed system would start the car. Dr. Brown has the theory that the vacuum tank acts as an absorber at times for light vapors which may be formed in the fuel line and bubble back up to the liquid body in the tank, thus making the contents of the tank even more volatile than the main body of gasoline in the car's tank.

With his vapor pressure tests Dr. Brown has obtained entirely



Gasoline manufacturers stretching their legs after a 140-mile bus trip to the Carter Oil Co. plant at Seminole

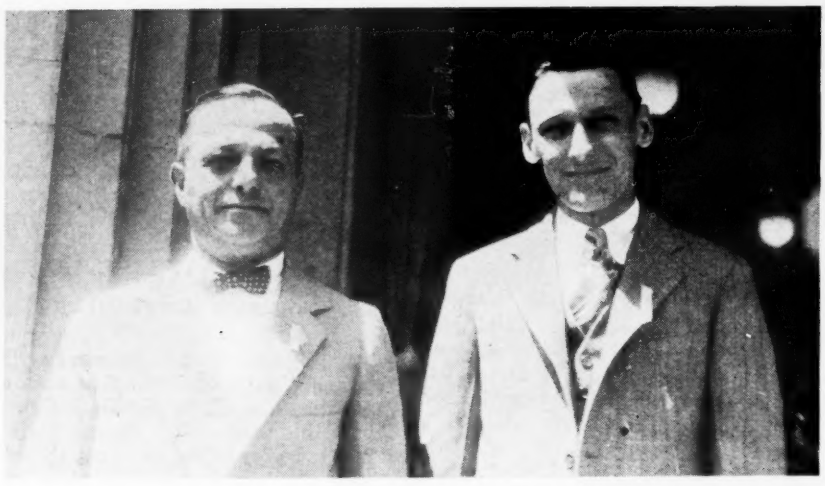
consistent results under all sorts of operating conditions.

An interesting theory of a carburetor manufacturer that some gasing in the carburetor is desirable was explained by Dr. Brown. He said that carburetors must be set to give a mixture rich enough for easy starting and cold operation. As the motor heats up the mixture may be leaner but the motor car operator cannot be getting out to adjust the carburetor every time he gets his engine warm. If the gasoline vaporizes in small amounts in the carburetor this gas will serve automatically to make the mixture leaner by decreasing the fuel flow through the duct.

Dr. Brown complained that motor car manufacturers are making cars for the kind of gasoline sold in 1921. They still apply large amounts of heat to the intake system to vaporize 1920 and 1921 gasoline, ignoring the fact that refiners have been increasing the volatility of their gasolines year by year since then. He pointed out that, by heating up the gasoline, they are aggravating the knocking tendency in their motors. He stated that cars like Chevrolet with no heat on the manifold are operating very satisfactorily on today's gasoline and that all cars could be run without a heated manifold better than with the heat.

Discussion of Dr. Brown's progress report centered about the effect of his vapor pressure and volatility findings on the practical matter of providing refiners with blending material which will enable them to produce a motor fuel which will give maximum results.

George L. Ratcliffe, vice president of the association, who was chairman of the meeting at which Dr. Brown concluded his report, summed up the opinion of the manufacturers as the meeting closed. He said that undoubtedly the research work will require a change in the specifications for natural gasoline at some future time. His idea was that the future specifications will include vapor pressure, effective volatility and chemical composition such as the quantitative analysis of the butane, pentane, hexane and other fractions present in the fuel.



Morris Milder, of the U. S. Oil Works, Omaha, who sells Phillips 66, snapped at the convention with M. E. Foster, of the Phillips Petroleum Co.'s sales department

Dr. Brown suggested to the manufacturers that they might as well set up as a top grade a gasoline extracted entirely from natural gas, with a low enough vapor pressure so that it may be used directly in motor cars without danger of a gas lock. This would be a grade similar to the straight natural gasoline which was used by Art Goebel in his Pacific flight and is now being used commercially in this country at a number of airports. From this grade there might be others of increasing vapor pressure, so that a blender could order by vapor pressure, depending on the vapor pressure of his refinery gasoline and be assured that his final product would be entirely satisfactory.

Dr. Brown has not receded from his original position that an excellent motor fuel can be prepared using 50 per cent naphtha gasoline. He approves of using a high end point naphtha for blending providing sufficient natural gasoline is used to keep the distillation curve low at the 50 per cent point.

As a contribution to the testing methods of the industry, Dr. Brown has built a laboratory test apparatus for fractionating complex hydrocarbons into their various compounds. He is able to determine the percentage of fractions such as butane in a gasoline within .005 of one per cent. The device is a fractionating column with a reflux which can be heated to 500° F. or reduced in temperature to minus 60° F.

High Pressure Rectifying Columns

HIGH pressure rectification will be the fractionating method used in the natural gasoline industry of the future, according to the opinion of many technologists as expressed at the convention of the Natural Gasoline Association.

Discussion of rectification processes and problems was more free at the present convention than at any previous meeting, probably because of the two federal court decisions holding stabilizer patents to be invalid and because of the great advances made in the art of fractionation in the past year.

G. G. Oberfell, director of research for the Phillips Petroleum Co., led in the discussion of fractionating methods, following a paper on that subject by L. S. Gregory, consulting engineer. Mr. Oberfell gave a historical sketch of the industry in the course of which he stated that the industry began realizing, about 1921, that it must reduce the volatility of its product to cut down handling losses at refineries. This era began when refiners began using the product more generally and natural gasoline manufacturers began to abandon their former practice of buying blending naphtha

Gasoline manufacturers at Seminole inspect high pressure rectifying column in process of construction

to prepare motor fuels at their own plants.

In some cases Mr. Oberfell believes it will be more economical to practice recirculation of gasoline vapors at the gasoline plant rather than to install a rectifying column. He reported that it is possible to obtain comparable results through recirculation and stated that he has seen plants producing 90 per cent recovery gasoline with less than 1 per cent propane content by this method.

Factors which will guide the manufacturer in his decision as to method will include the quantity of gasoline to be treated, the specifications of the product desired, competition and the equipment already installed.

Low temperature, low pressure processes have a limited application he said, due partly to difficulties in eliminating all moisture from the system which might freeze up and shut down the plant.

In this connection H. W. Parmelee of the California Gasoline Co., reported that his company began working with a column under a pressure first of 5 pounds per square inch. Since then the pressure has been stepped up gradually until now it is about 190 pounds. His organization now is making gasoline with a recovery of 94 per cent and upwards.

Sidney S. Smith, of the Roxana Petroleum Corp., is telling the gasoline men visiting his plant about the unit plan followed at all plants his company has built recently

Mr. Oberfell told the manufacturers that essentially rectification is merely a repetition of simple distillation. Reflux, he said, is necessary to establish the temperature gradient.

Some discussion arose as to the best point at which the column feed should be introduced in the column. The most prevalent opinion is that the feed should enter on that plate which seems to carry a liquid with specifications most nearly like the raw feed.

Gas Lift and Gasoline Manufacture

THE gas lift and its relationship to the natural gasoline industry created a lively discussion at the natural gasoline convention after that subject had been treated by H. B. Bernard, vice president of the Sinclair Oil & Gas Co.

G. M. Davidson, of the Empire Oil & Refining Co., pointed out that no satisfactory working arrangement between producer and gasoline manufacturer has been worked out thus far. The idea is still young and conditions differ from field to field so that it has been difficult to get an arrangement under which both have felt they were getting a fair share of the profits.

In Seminole producers have felt justified in building compressor plants ahead of production on the theory that they could return the investment cost in a short time. Mr. Davidson pointed out that gasoline profit is so small that gasoline plants must not be built for a short productive life.

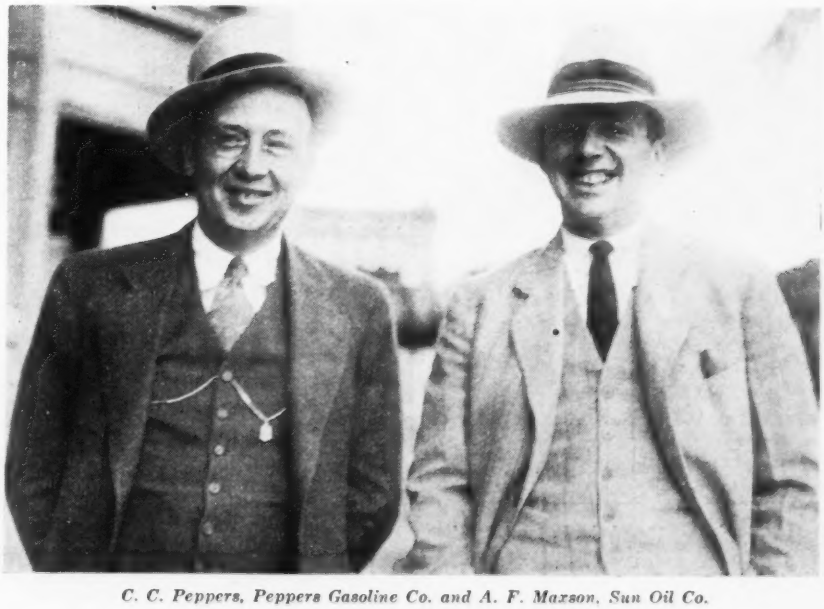
Another point of difference is that the gasoline manufacturer cannot build a plant large enough to handle all of the flush gas. Mr. Davidson pointed out also that more than half the cost of making natural gasoline is from the accumulator tanks to destination and not from the well to the accumulator.

There was general agreement with Mr. Bernard that it is impossible to avoid making gasoline at gas lift plants. He showed that it cannot be put into the oil already produced because of the objections of oil buyers. In repressuring it might be put into the sand again but Mr. Davidson thought the advantage would be small.

Suggestion was made that the gas lift actually is only a method for producers to use to beat their neighbors to the oil. Mr. Davidson suggested that probably the best method will be found in the future to be a scheme for prolonging the life of available gas in some sort of unit plan of operation.

There was a good deal of difference of opinion as to the advisability of using portable compressors for the gas lift or large central plants with heavy duty engines. Some speakers thought a combination of the two desirable, since a fire or other accident at the main plant would not shut down the properties entirely with a number of plants. Several speakers agreed that it may be better to allow the gasoline to blow off into the air at compressor plants rather than to finish it up at considerable expense and then flood a market which will not absorb the offerings. Thus far it has been difficult to get that point of view over to the producers.

J. N. Hicks of the Superior Oil Co. of California, reported he has found it difficult to raise salt water economically with a gas lift. He said that the air lift can be used for 80 per cent of the life of any field. Taking issue with him others thought that the gas lift might be used for 80 per cent of the production but not 80 per cent of the life of a field. At Garber Mr. Bernard said his company was successful in raising large quantities of salt water at a small cost.



C. C. Peppers, Peppers Gasoline Co. and A. F. Maxson, Sun Oil Co.

H. A. Trower Heads Gasoline Men Again

H. A. TROWER of the Phillips Petroleum Co., Bartlesville, was re-elected president of the Natural Gasoline Association of America at this its seventh annual convention. His entire official family was elected for a second term also.

Vice presidents re-elected are S. C. Carney of the Roxana Petroleum Corp., Tulsa; George L. Ratcliffe of the General Petroleum Corp., Los Angeles; and Dr. E. R. Lederer of the Texas Pacific Coal and Oil Co., Fort Worth.

A. V. Bourque, secretary, was re-elected for his eighth term by the board of directors.

Three new companies were invited to select representatives to serve on the board of directors for the next two years. They are the Palmer Corp. of Shreveport, the Virginian Oil & Gasoline Co. of Charleston, W. Va., and the Standard Oil Co. of California.

Nine companies were re-elected to the board. These companies with their representatives for the past term follow: F. E. Rice, Phillips Petroleum Co.; M. E. Mockley, Amerada Petroleum Corp.; Emby Kaye, Skelly Oil Co.; F. C. Hall, The Henderson Co.; George A. Burrell, Burrell Oil & Gasoline Co.; W. N. Corbet, Eagle Pitcher Lead Co.; J. A. Rafferty, Carbide & Carbon Chemicals Corp.; J. E. Hare, California Gasoline Co.; and H. B. Bernard, Sinclair Oil & Gas Co.

Following are the hold-over directors who have another year to serve: E. L. Peck, Empire Oil & Refining Co.; F. L. Chase, Lone Star Gas Co.; D. E. Buchanan, Chestnut & Smith Corp.; W. G. Clute, Prairie Oil & Gas Co.; L. B. Jackson, Oklahoma Gasoline Plants, Inc.; W. A. Melton, Shaffer Oil & Refining Co.; C. S. Roeser, Roeser & Pendleton, Inc.; A. J. Schlosser, Barnsdall Refining Co.; G. G. Shallenberger, Marland Refining Co.; O. H. Schoenwald, L. H. Wentz, Inc.

Satterwhite Heads Supply Men's Group

A PERMANENT organization of manufacturers of natural gasoline plant equipment was perfected May 22, to be known as the Natural Gasoline Supply Men's Association. The organization will be an auxiliary of the Natural Gasoline Association of America.

J. H. Satterwhite of Westcott & Greis, Inc., Tulsa, was elected president. Vice presidents are: M. F. Waters, Smith Separator Co., and William Schleuter, Refinery Supply Co. W. H. McKaye, Hope Engineering & Supply Co., was made treasurer and A. V. Bourque was made secretary of the new organization as well as of the gasoline manufacturers.

Directors for the first year are: W. G. (Bill) Cummings of the Gas Engineering & Const. Co.; W. D. Emery of The Foxboro Co., Inc.; W. Woobank of the Woobank Pump & Machinery Co.; P. P. McKirahan of the Continental Tank Car Co.; and H. A. Trower of the Phillips Petroleum Co., who becomes a member by virtue of his office as president of the Natural Gasoline Association.

A temporary organization which has been functioning during the past year prepared two lunches for the gasoline men at the convention and an elaborate smoker and entertainment the evening of May 23. The permanent organization expects to furnish entertainments for the convention visitors each year in the future.

Secretary A. V. Bourque of the Natural Gasoline Association, helps R. E. Beckley of the Standard Gasoline Co. of California, adjust his tie after a rough bus trip to Seminole

Understanding of Control Devices Necessary

Generally the reason why control devices give trouble at gasoline plants is that plant operators do not thoroughly understand the principles underlying their operation, E. L. Peck, manager of the gasoline department of the Empire Oil & Refining Co., told the manufacturers.

Mr. Peck suggested that engineers installing these devices should take the time to explain them in simple, understandable terms to the plant men. With knowledge as to how a control works and why it works the plant man can watch the device intelligently and keep it working.

This suggestion was made following presentation of a paper on automatic controls by T. G. Laney of the Fisher Governor Co. W. A. Melton

R. B. Millard, of the Southwestern Engineering Corp., was glad to show how Southwestern equipment is working at Seminole

Dean Hiatt of Thurber, Texas, general superintendent of gasoline plants for the Texas Pacific Coal & Oil Co.

J. H. Satterwhite, of Westcott & Greis, Inc., newly elected president of the Natural Gasoline Supply Men's Association

of the Shaffer Oil & Refining Co. led the discussion on controls. He said that the manufacturers have cooperated with the gasoline men in solving control problems and gave them a new problem from the convention floor. It is to build a device which will control the volume of oil going to absorbers to a proper ratio to gas going to the absorbers when the gas volumes vary from hour to hour.

Doctor Test to Be Added

The board of directors of the Natural Gasoline Association voted at their annual meeting to add the doctor test to the specifications of all grades of natural gasoline. The step was taken in deference to the rapidly increasing demand for doctor test naturals by refiners and blenders of export grades of gasoline. The change will be effective at an early date. Following is a statement from the association regarding the proposed change.

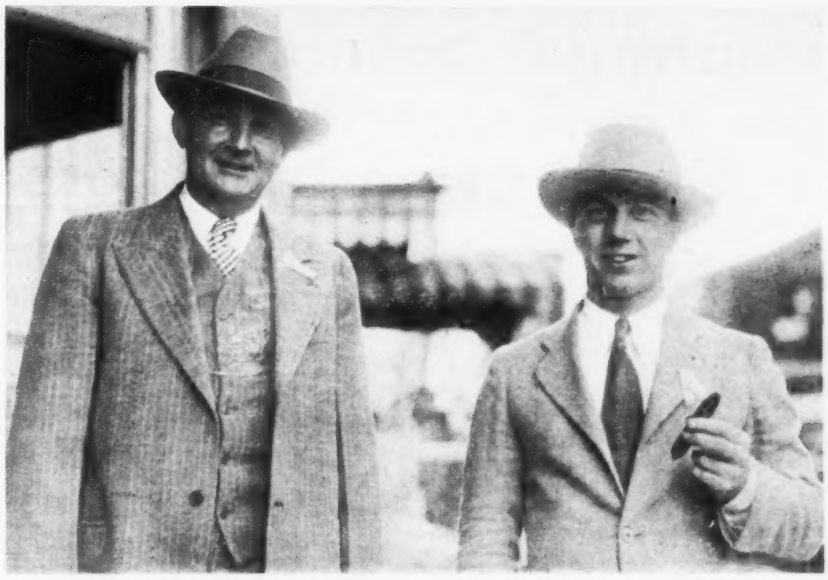
"Perhaps no problem of the Association has been given more serious consideration than the question of making 'doctor sweet' natural gasoline a part of the official specifications. The demand for sweet gasoline has been large for the past several years, most refiners demanding it both for domestic and export uses.

"The directors of the Association appreciate that there is a movement of sour gasoline and that quotations on that grade of material should be carried in trade papers apart from specification gasoline as long as there is a considerable movement of that grade.

"The cost of making natural gasoline, 'sweet to doctor' is remarkably low. The Natural Gasoline Association of America will be glad to furnish treating costs, methods of treating and any other aid to those who wish to equip with treating plants.

"The Board of Directors of the Natural Gasoline Association has requested the Specifications Committee to set a date on which the new specification will become effective and also to determine the method which shall govern the test."

H. W. Parmelee, of the California Gasoline Co., at Seminole



Paul M. Childers, superintendent of meters and testing, and J. E. Jones, general superintendent of gasoline plants, Marland Refining Co.

Merchandising Era Dawns

The dawning of a new era in the oil industry was forecast by D. E. Buchanan of the Chestnut & Smith Corp., in leading discussion of a paper on marketing written by W. T. Anderson of the Oil & Gas Journal.

"The industry has been in a manufacturing era in past years," Mr. Buchanan said. "In this era it has made remarkable progress in methods of finding oil and manufacturing products from it. The manufacturers have been much more successful on their jobs than the salesmen in theirs.

"I believe that we are entering a merchandising era in which the industry will seek new markets and sell its products in a better manner." Special advice was given to the gasoline manufacturers who are developing new by-products of natural gasoline. Mr. Buchanan urged that, if they could manufacture a by-product worth a dollar a gallon for 4 cents they ought not to follow former practice by selling it at 4½ cents a gallon or at cost or less.

Satirical Paper

S. C. Carney of the Roxana Petroleum Corp. and a vice president of the association, rocked the gasoline manufacturers with mirth with a paper which he read under the title, "Some Considerations Affecting the Butane Supply." The paper was a satire on technical papers ending with the moral: "Don't take yourself too seriously."

Trip to Seminole

Sixty gasoline manufacturers at the convention made a trip to the Seminole field May 24 after the close of the meeting in special buses and cars arranged by Secretary A. V. Bourque. In the 300-mile round trip visits were made to plants of the Carter Oil Co., Sinclair Oil & Gas Co., Indian Territory Illuminating Oil Co. and the Roxana Petroleum Corp.

Large Attendance

Attendance at the natural gasoline convention was one of the best on record since the association was organized in 1921. Registrations totaled 564, it was announced by A. V. Bourque, secretary.

A special car brought 17 manufacturers from California under the leadership of George L. Ratcliffe, president of the California Natural Gasoline Association and vice president of the Natural Gasoline Association of America. There were a number of visitors from eastern fields as well.

Ben F. Koehler, of the George F. Getty Gasoline Co., Los Angeles

Scouting is School for Future Executives, Convention Speakers Bring Out

By John Power
N. P. N. STAFF WRITER

AMARILLO, May 26

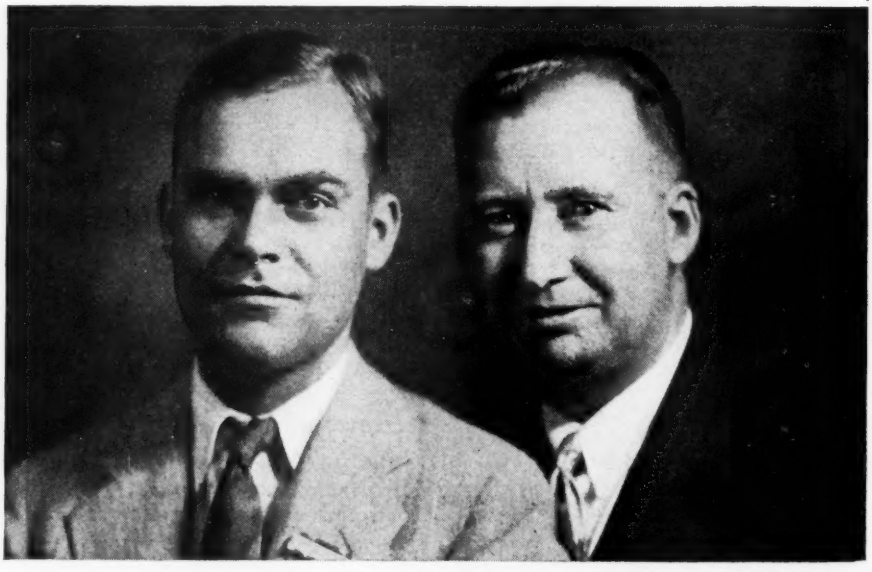
THE Texas Panhandle, not unfamiliar to scouts of all varieties since the pioneer days, was host to the National Oil Scouts Association during its convention here May 21 and 22.

Like the Mid-Continent Oil Scouts and Land Mens Association, which held its convention at Guthrie, Okla. about a month ago, the men who are "The Eyes of the Industry" in Texas, Louisiana and Arkansas met for a two-day period of relaxation and discussion of their common problems.

Guy R. Nicholson, Panhandle district scout for the Empire Gas and Fuel Co., was elected president of the association for 1928. Others elected to serve with him were; Ford Turner, San Antonio district, Pure Oil Co., first vice-president; C. R. (Bob) Edwards, Gulf Refining Co., Shreveport, second vice-president; J. H. Langston, Dallas, Sun Oil Co., secretary-treasurer, and R. T. Lutz, Wichita Falls, Humble Oil and Refining Co., chairman of the executive committee.

The fact that these men meet to discuss anything is indicative of the change which has taken place in oil scouting since the first scout grabbed the first sand sample and ran hell for leather for his horse, which was tethered in the brush at least a mile down the road.

No longer is it treason to their respective companies for the scouts to exchange information. Under the new order it is impossible for them to work otherwise. The companies themselves exchange "dope" in a way which was unheard of but a few years ago. So far as the depths of drilling wells is concerned, it is possible for the chief scouts, sitting in their offices in Tulsa or Fort Worth, to get a great deal of this information by telephone.



Guy R. Nicholson, Empire Gas & Fuel Co., scout in the Panhandle territory, president, and J. H. Langston, Sun Oil Co., Dallas, secretary-treasurer of the National Oil Scouts Association

These changing conditions have brought about changes in the scouts themselves, as well as in their work. Some of the work of the old fashioned scout was done in the saloons, where he bought drinks and kept on buying drinks for the drillers until they told him how deep they were.

Today, with the log on a board in the "dog house," the scout can turn his attention to other things. By the variety of the information which his company requires he must familiarize himself with geology, land and lease work, drilling methods and procedure, types of pipeline construction, local production records; in fact, if there is anything in the producing end of the oil business about which the scout is not required to know something, then the executives of the companies have not thought of it.

With more than 300 members registered the convention got under way in short order. The program the first day consisted of two business sessions, followed by the annual stag banquet, held this year in the Crystal Room of the Herring Hotel.

F. J. Hill, president of the Mid-Continent Oil Scouts and Land Mens Association, represented that organization. As in the past, the hope was expressed that these two associations will find it possible to consolidate at some time in the future.

The place of next year's meeting, which is decided by the executive committee, was not announced at this time. An unofficial or "Boilerhouse" caucus showed San Angelo and Shreveport as the two most likely towns.

Left to right: Ford Turner, Pure Oil Co., San Antonio; R. C. Edwards, Gulf Refining Co., Shreveport, vice presidents; and R. T. Lutz, Humble Oil & Refining Co., Wichita Falls, Tex., chairman of the executive committee of the National Oil Scouts Association

Papers on the general oil development in the various scouting districts as well as on scouting in general were prepared and put in booklet form.

E. J. Raisch, Republic Production Co., well defined scouting in his paper. He said in part:

"Scouting brings one in touch with every branch of the oil business. Therefore it is the best school for training the general all-round executive, the man who is not a specialist, but who can constructively criticize and phase of the oil business. The definition of the verb 'To Scout' is to listen, to hear, to observe and by implication to report what you hear or observe. It says nothing about expressing a personal opinion.

"To make a clear, concise, intelligent and impersonal report of what you see or hear is not a simple thing to do.********In various branches of the oil business there are certain phases with which every scout should be acquainted, for nowadays he is frequently called upon to report what is going on in his district in every branch of the business.

"Without the need of expert knowledge, a scout, nevertheless, may be sufficiently intimate with the work of the different divisions so that he can observe with the eye of intelligent understanding.********Before an oil company undertakes the development of an area it first investigates it.******** In the land and leasing branch of the business we are interested in knowing where acreage is being bought, what is being paid for it, and how soon it will be developed.********

"Primarily the object of scouting is to report on the progress and outcome of drilling wells. A scout must be familiar with the location and each of the progressive steps taken in the drilling of the wells in his district.***A scout's reports***impel his company to active prosecution of contemplated work.***Obviously a scout can not be too rigidly exact in what he reports.

"Production records over a period of time are always important. The flow or conduct while pumping, temperature fluctuations, length of time it took for the water to reach a field, unique characteristics of an oil, are also important. Production records are used as a basis in buying and selling leases, and as the amounts involved sometimes run into millions a production scout's reports are of considerable importance.******A scout reports pipeline construction, its size, where it is headed for, and progress during construction.

********"The most valuable asset that you can acquire through the use of common sense and intelligence is practical experience.******The search for oil is becoming more keenly competitive every year, and if we wish to remain in the vanguard and act as the eyes of that large-visioned but intensely practical group of men who have made this business what it is, then we must, both as individuals and as an association support such standards of thought and work as will not only retain us in our present useful capacity, but will develop in us a capacity for greater usefulness."

Standard Oil Co. of Ohio Joins National Petroleum Assoc.

CLEVELAND, May 28

THE Standard Oil Co. of Ohio was elected a member of the National Petroleum Association at a meeting of the board of trustees of the association May 18, according to a bulletin sent out to members by Fayette B. Dow general council of the association.

The same bulletin also chronicles the visit of members of the association to the Marcus Hook refinery of the Pure Oil Co. on May 25.

Vice President Webber of the Pure Oil Co. and R. C. Osterstrom, chief chemist of the company were on hand to welcome the visitors to the refinery. E. A. McCadden, superintendent of the refinery and John Grace and Charles Clark were the other hosts. The guests were divided into four groups and were shown the laboratory, tube stills, Cross cracking units, receiving house, contact filter plant, continuous treaters, agitators, wax plant power house, acid sludge reclaiming plant, and other parts of the refinery.

The visitors were guests of the Pure Oil Co. at lunch at an inn where President E. M. Lyons of the association and others expressed their appreciation of the courtesy shown them.

The representatives of member companies who attended were:

Carl Alsberg, Franklin Creek Refining Co.; A. F. Anderson, Crew Levick Co.; C. A. Boler, Tiona Refining Co.; E. F. Burch, Crew Levick Co.; Edward Bush, Acewood Petroleum Corp.; C. P. Caulkins, Tri-State Refining Co.; Charles Clark, Pure Oil Co.; Lon Crawford, Kendall Refining Co.; G. C. Davison, Tri-State Refining Co.; Fayette B. Dow, general council, National Petroleum Association; A. A. Forter, Crew Levick Co.; A. P. Frame, Crew Levick Co.; Luther Fulton, Pennzoil Co.; M. J. Glynn, Emlenton Refining Co.; John Grace, Pure Oil Co.; J. W. Griswold, Crew Levick Co.; D. J. Harvey, Pennzoil Co.; L. C. Jamieson, Viking Oil Corp.; E. M. Keeley, Crew Levick Co.; O. P. Keeney, The Keeney Oil Co.; E. M. Lyons, Tiona Refining Co.; W. W. Lowe, Henry L. Doherty & Co.; A. Mulhaupt, Jr., Kendall Refining Co.; E. A. McCadden, Pure Oil Co.; Bruce Northrop, Ohio Valley Refining Co.; R. C. Osterstrom, Pure Oil Co.; Earl Petty, McKean County Refining Co.; W. R. Reck, Bradford Oil Refining Co.; H. E. Shoemaker, Independent Refining; S. P. Stannard, Pennsylvania Oil Products Refining Co.; H. W. Walchli, Tiona Refining Co.; N. H. Webber, Pure Oil Co.; M. B. Whitney, M. B. Whitney Co.; R. A. Wotowitch, Henry L. Doherty & Co.

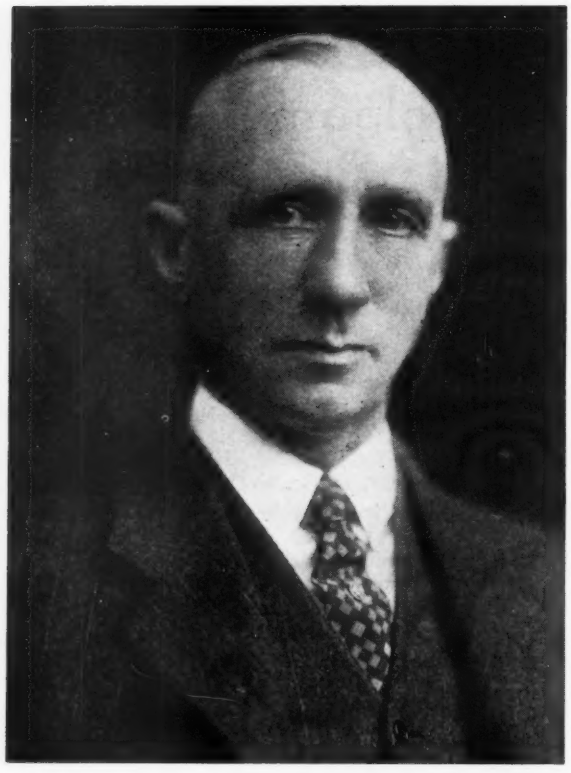
REX G. HAMAKER

Hamaker Will Head Reed's Research Department

HOUSTON, May 28.—Rex G. Hamaker, chief engineer for the past eight years of the Humble Oil & Refining Co., has left that company to head a new department for the Reed Roller Bit Co. That department will be devoted exclusively to the improvement of existing tools and to the development of new tools for all branches of the oil industry. It will be known as the research department and Mr. Hamaker will be in charge as director of research, with headquarters at Houston.

Mr. Hamaker, who has to his credit the invention of a number of tools which are now being used throughout the rotary fields, is a graduate engineer from Stanford University. He spent three years with the Standard Oil Co. of California, and nine years in the Humble's engineering department.

Mr. Hamaker is also chairman of the engineering sub-committee of the committee No. 4 on standard rigs and derricks of the American Petroleum Institute. He will assume his new duties with the Reed company July 1, and plans to spend the balance of the year in the various rotary fields of this country, Canada and Mexico.



T. S. Southgate, president of the South Atlantic Oil Co., Norfolk, Va.

Oil Station Solves Problems—

South Atlantic Oil Co. provided adequate Va., for free use of retail store patrons, signing contracts for 25,000 gallons of area patrons of retail stores are liber

By E. L. Barringer,

CLEVELAND, May 26

PARKING automobiles has been a profitable business in many cities. Some persons have made this profit through renting space for a car at 25 cents and upwards. But the South Atlantic Oil Co. has turned a neat profit by providing a city with free parking.

Norfolk, Va., a city of some 200,000 population, was confronted with the same problem facing many cities —that of providing adequate downtown parking facilities. Merchants recognized the need through loss of sales. The upshot was a mutual arrangement whereby the city got a free parking space, while the South Atlantic Oil Co. was given contracts for 25,000 gallons of gasoline monthly from the merchants, for the term of the agreement.

Some 18 months was required to work out plans between the South Atlantic Oil Co. and the Retail Merchants Association of Norfolk, Va., and the grounds were opened in February.

The South Atlantic Oil Co. agreed to provide space for 1000 to 3000 automobiles as patronage demands; provide adequate maid, information bureau, and attendant services; and to maintain the grounds. Parking is free to residents on courtesy cards given by merchants, free to people from out of town and a charge of 25 cents is made to others. The project has cost the South Atlantic Oil Co. $22,000, including all equipment, but exclusive of property leases.

In turn the merchants association obtained and delivered contracts for 25,000 gallons of gasoline and oil each month for the three years of the agreement, which is subject to renewal. A service station is maintained by the South Atlantic Oil Co. at the parking space, with facilities for servicing, washing, greasing, watering batteries and filling radiators while patrons are shopping. Any revenue from the 25-cent charge goes to the oil company.

Merchants cooperate by giving space in their advertising to tell of the free parking space. Purchases are delivered to the parked cars. The space is two blocks from the center of the retail section.

"The space was acquired under a three-year lease with an option to renew for seven additional years," said Ernest R. Harden, Jr., vice-president and general manager of the South Atlantic Oil Co.

"A liberal portion of three city blocks is covered by the parking center, and, while this particular location is passing now through a low ebb in desirability for residences, the necessary cost of lease and preparation has mounted into a substantial figure.

"Seven dwelling houses, over a hundred years old, were razed, poles removed, cellars and old cisterns filled and graded—all this leveled and dragged—on which six inches of cinders were spread and rolled with a five-ton roller. After this two inches of granite stone and dust

On the left, exterior view of the service station of the South Atlantic Oil Co., at the community parking center in Norfolk, Va. The station serves patrons and offers a washing and greasing service while owners are shopping. Right, a corner of the station waiting room

Town's Parking At a Profit

downtown parking facilities at Norfolk, and in return merchants cooperated by gasoline and oil a month and parking ally patronizing adjacent service station

N. P. N. Staff Writer

Ernest R. Harden, Jr., vice-president and general manager, the South Atlantic Oil Co., Norfolk, Va.

were spread and rolled. This was then left in this condition, and after several rains was rolled again.

"The effect is that we have a hard surface spread, with a very clear, white appearance, especially after rains. This work cost approximately $3800.

"The entire parking area is enclosed with a box hedge, with openings every hundred feet or so wide enough for a person to walk through, but not wide enough to permit a car to drive through.

"At one end of the main parking area is located our building, which affords all the necessary services. Each car entering the area must either go by or through this space where gasoline and motor oil pumps are conveniently placed for servicing.

"Each car, when entering the parking area, is met by a courteous man in uniform. He shows each driver just where to place his car and, in an unoffending manner, asks if there is any service they wish—such as filling cars with gasoline or oil, air placed in tires, water in radiators and batteries, etc. Considerable business is picked up in this way."

This plan has finally developed into what is shown in the following illustration:

"A person living any distance from the city can drive in with ease and safety for a day's shopping, be properly directed to the community parking center by signs placed at strategic points and by the local police," said Mr. Harden. "His car serviced and taken care of, he has 'all the comforts of home.' He uses the telephone for calling friends and making appointments, makes up a shopping list from the classified directory of mercantile establishments, has all his purchases immediately delivered to his car. After luncheon and a possible visit to a local movie he calls and presents his identification check, and, unless his car has been serviced, with a simple 'Thank you' he discharges all his obligation for the service rendered.

"This, of course, applies to local shoppers as well, and thousands are making use of the many conveniences the South Atlantic Oil Co. has made possible for those patronizing the community parking center. Those using the parking area and not making their necessary purchases of gasoline and oils are considered a prospect and a future customer. Our records show the volume of business from the parkers alone is increasing each day.

"A Colonial type of building has been erected to provide the necessary waiting room, service room, check room, etc. Directly in back of this building we maintain an auto laundry capable of washing 40 to 50 cars a day. This, together with the main building, involves an investment of approximately $7000, exclusive of equipment.

"No expense has been spared to completely equip this building—the

(*Continued on next page middle column*)

Two more views of the waiting room. On the left is a view of the fireplace. The picture to the right shows the furniture and window draperies. Shopping and theater directories and telephones are maintained in the waiting room for patrons of the community parking center

Gasoline Stocks Drop in April

NEW YORK, May 26.—An increase of 2,101,000 barrels in pipe line and tank farm gross domestic crude oil stocks east of the Rocky Mountains is reported for April in the American Petroleum Institute's preliminary figures. This increase compares with gains of 3,496,000 barrels in March, 1,961,000 barrels in February and 3,713,000 barrels in January.

Refinery stocks of gasoline east of California decreased during April for the first time this year, falling off 204,000 barrels, and standing at 27,413,000 barrels April 30 east of California. This compares with increases of 379,000 barrels in March, 1,512,000 barrels in February and 2,602,000 barrels in January.

Gas and fuel oil stocks gained 701,000 barrels in April east of California, compared with decreases of 143,000 barrels in March, 61,000 barrels in February and 1,987,000 barrels in January.

Lubricating oil stocks decreased 99,000 barrels in April, compared with a decrease of 10,000 barrels in March.

Kerosene stocks gained 30,000 barrels, compared with a 35,000 barrel increase in March.

Refinery stocks of all products gained 1,540,000 barrels in April east of California at plants covering approximately 87 per cent of the operating capacity.

This compares with increases of 534,000 barrels net in March, 1,161,000 barrels in February, and 2,757,000 barrels in January.

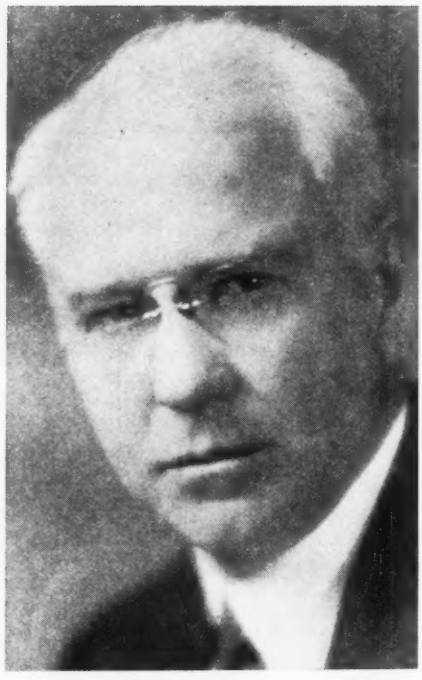
Refinery stocks of crude oil showed net increase of 157,000 barrels east of California, stocks of domestic crude decreasing 366,000 barrels and foreign crude increasing 523,000 barrels, compared with a gain of 812,000 barrels in March.

* * *

LOS ANGELES, May 25.—Stocks of light crude oil in California decreased 530,176 barrels during April and for the 12 months previous decreased 9,732,709 barrels. This steady decrease is indicated in the A. P. I. April report just released.

Total stocks of all petroleum products in California during April decreased slightly more than 1,000,000 barrels, with a net decrease of 8,866,311 barrels for the 12 months ending April 30. Stocks of gasoline during April declined 44,717 barrels, with a net decrease of 963,476 barrels during the previous year.

Stocks of heavy crude including all grades of fuel oil, increased 4,577,684 barrels during year ended April 30, although this class of stocks was reduced 482,312 barrels during April, reflecting the first results of the shut-in campaign in California.



G. LESLIE HALL
Chairman of parking committee of Retail Merchant's Association, Norfolk, Va., who was of much assistance in establishing the community parking center

(*Continued from preceding page*)

cost averaging in the neighborhood of $1200, which covers rugs, furniture, draperies, curtains and attractive gas mantlepiece and every other consideration for the comfort of those using the community parking space.

"An electric sign spans the street leading to the parking center, showing for several blocks both day and night, and carrying the wording 'Community Parking Center.' Not including cost of operation, the sign inventories at $1250.

"Telephones, salaries and other items of overhead expense are aggregated about $1500 a month.

"We would say that the community parking center, as a whole, is a success," Mr. Hardin continued.

"This project has been financed by the South Atlantic Oil Co. 100 per cent—the only stipulation to warrant our interest in this matter was the massing of purchases of gasoline and oils by local business houses to the extent of 25,000 gallons a month during the term of this agreement. It is further agreed that the quality of the product furnished must be at all times equal to that furnished by other operating companies, and that the price shall be that of the prevailing local market," Mr. Hardin concluded.

CLEVELAND, May 26.—Missouri voters will vote in November on a proposal to issue $75,000,000 of state highway bonds. Attached to the proposal will be an amendment to the state constitution which would limit the gasoline tax to 2 cents a gallon for 10 years.

Talk North Winkler Proration

HOUSTON, May 25.—Another hearing has been called for Fort Worth, May 31, by the Railroad Commission of Texas to consider rules for prorating of crude in the area of the Leck well discovery[1], sec. 3, block 74, nine miles north of Hendricks field production.

The question at issue is whether existing Winkler county general rules are to be changed for the purpose of separating administration of the old producing area from the new.

Although the Leck well is now capable of making only a small amount of oil, after water broke in on the previously prolific pay horizon, its importance in proving a vast area for future oil production is not discounted. The well made at the rate of 9200 barrels daily at its maximum. Afterwards a test showed upwards of 90 per cent b.s. and water while flowing more than 400 barrels hourly of fluid.

When tested for 12 hours, May 23, the Leck well flowed 3600 barrels of fluid through 1½-inch choker. The total flow included 2537 barrels of sulfur water and 1063 barrels of cut oil, testing about 25 per cent b.s. That figures out roundly 800 barrels of oil, or roughly 20 per cent of the total. The gravity is 30.9 degrees A. P. I., at 89 degrees Fahrenheit.

As the Leck well is within three and a half miles of the Lea county, New Mexico, gasser of Marland Production Co., on the Eaves permit, 19-26S-37E, the opening of the area for oil suggests the possibility of an interstate conservation problem. The Marland well, which made a maximum of 65,000,000 cubic feet daily at 2927 feet, was mudded off for deepening in search of oil.

Northeast of the Marland well, in 15-26S-27E, the Texas Production Co.'s Rhodes averaged more than 100 barrels of crude and distillate daily for months after completing at 3213 feet.

About three miles northeast of the Leck, in sec. 1, block C-22, Winkler county, Texas, two small wells of the Llano-Roxana partnership on the Scarbauer ranch have been making 15 to 25 barrels daily at about 3150 feet.

The Llano-Roxana No. 3 Scarbauer test, now being drilled 990 feet from the south and west lines of sec. 2, block C-23, about a half mile south of the New Mexico line, will throw new light on territory between the four outposts discussed. The willingness of the Gibson & Johnson interests to pinch the Leck well to minimum daily production, provided a curtailment plan is put in effect, has been expressed by H. F. Gibson of Abilene.

1—NATIONAL PETROLEUM NEWS, May 16, 1928, page 30.

Taxes Indicate Per Car Consumption Increased 60 Gallons in 1927

By Roger B. Stafford
N. P. N. STAFF WRITER

CLEVELAND, May 26 GASOLINE tax reports from 46 states and the District of Columbia for 1927 indicate the average consumption of gasoline per motor vehicle for the United States, exclusive of New York and Massachusetts, was 515.4 gallons. This was an increase of 60 gallons per vehicle over the average in 1926 in the United States exclusive of those two states and Illinois and New Jersey, where gasoline tax figures were not available in 1926.

Gasoline tax receipts, after deduction of refunds by some states on gasoline not used on the public highways, amounted to $258,192,195.91. This sum is compiled from reports direct to NATIONAL PETROLEUM NEWS from each of the states that had taxes. In 1926 the net gasoline tax receipts were $186,416,573.20, the 1927 gain being $71,775,622.71, or 38.5 per cent.

The 60-gallon gain in average consumption per vehicle seems abnormal, but, as the 1926 average of 455.4 gallons per vehicle was 20.7 gallons per vehicle less than the 1925 average, it would seem that something was wrong in the 1926 tax returns, perhaps some laxity in collection.

Addition of Illinois which collected a tax the last five months of 1927, and New Jersey, which had a tax the last six months, would not have brought up the average by 60 gallons. Illinois with consumption estimated for the first seven months on a basis of demand for the whole country as reported by the United States Bureau of Mines in its refinery statistics, had an average consumption less than the country's total. New Jersey, with a half year's consumption estimated on the same basis, ran over the country's average but its gallonage was insufficient to account for so large a gain.

The net gallonage taxed in the 46 states and the district was 9,747,513,532 gallons. A total of 231,418,381 gallons was either exempted from taxation or refunds were made after taxes had been paid on it. Tax reports account for 9,978,931,913 gallons of the 12,512,976,000 gallons shipped from refineries in 1927 for domestic consumption, as reported by the Bureau of Mines. The difference of 2,534,044,087 gallons, it would seem, represents the gasoline consumed in New York, Massachusetts, by U. S. government owned vehicles, airplanes, boats, and by vehicles owned by those state, city and county governments that are exempt in some states from gasoline taxes.

Exclusive of the gallonage of Illinois and New Jersey, which had no taxes before last year, the taxed and exempted gallonage in the 44 states and the district amounted to 9,427,775,045

Average gasoline consumption per motor vehicle by states in 1927, as indicated by tax returns. Figures are gallons

1927 Gasoline Tax Statistics, Automobile Registration, Average Consumption per Car

	Tax Per Gallon	Net 1927 Tax Receipts	Net Number of Gallons Taxed in 1927	Number of Gallons Exempted	Cost of Collection	Automobiles Registered Dec. 31, '27	Average Registration in 1927	1927 Avg. Consump. Per Car	1926 Avg. Consump. Per Car
Alabama	2 & 4	$5,908,985.98	148,610,102	0	$ 23,540.71	243,539	234,595	633.4	608.8
Arizona	3 & 4	1,388,829.90	40,216,927	7,986,900	.....	81,047	77,310	520.2	460.5
Arkansas	4 & 5	4,197,307.42	83,946,144	0	28,300.00	206,568	207,994	403.5	481.5
California	2 & 3	21,489,495.40	1,196,543,641	0	16,594.49	1,693,195	1,646,835	726.5	528.9
Colorado	2 & 3	3,118,373.61	122,493,107	0	45,240.29	268,492	260,640	470.0	458.2
Connecticut	2	3,054,906.03	152,745,301	8,599,082	*45,000.00	281,521	271,216	563.2	527.9
Delaware	2 & 3	644,922.80	23,115,674	*800,000	60.00	47,124	45,771	505.0	462.5
District of Columbia	2	1,057,850.02	54,560,612	1,668,111	.....	111,680	120,736	451.9	456.5
Florida	4 & 5	10,980,585.50	251,410,081	0	2,800.00	394,734	405,832	619.4	846.6
Georgia	3½ & 4	7,921,622.51	218,987,895	0	5,000.00	300,635	287,336	762.1	599.8
Idaho	3 & 4	1,571,749.19	42,348,935	0	7,673.32	101,336	98,599	429.5	421.8
Illinois (5 Mos.)	2	6,248,000,000	312,400,000	.....	.....	1,438,985	1,404,744	†*502.0	.....
Indiana	3	10,134,791.78	337,826,393	0	15,183,78	813,637	792,926	426.0	396.5
Iowa	2 & 3	7,248,213.70	309,098,000	.....	14,295.14	704,203	696,640	443.6	360.7
Kansas	2	4,594,650.00	225,670,864	25,948,367	7,500.00	501,901	496,589	454.4	448.7
Kentucky	5	5,914,543.55	118,272,732	0	14,000.00	285,621	281,979	419.4	388.7
Louisiana	2	3,015,341.00	150,767,050	0	7,500.00	255,000	247,250	609.7	602.0
Maine	3 & 4	2,288,933.31	72,005,774	2,740,394	12,951.94	163,623	157,270	457.8	412.9
Maryland	2 & 4	4,169,396.96	118,335,211	0	2,500.00	270,935	259,996	455.1	484.2
Michigan	2 & 3	14,158,371.06	588,151,670	52,580,600	43,797.34	1,154,773	1,136,779	517.4	443.5
Minnesota	2	5,174,879.71	275,512,870	14,173,548	8,278.12	646,682	635,580	433.4	402.3
Mississippi	4	4,744,702.63	118,617,816	0	.....	218,043	214,272	553.6	547.3
Missouri	2	6,341,591.25	322,219,262	.....	48,488.16	682,419	666,885	483.1	450.9
Montana	2 & 3	1,410,294.00	47,009,800	4,516,039	4,975.00	112,735	108,340	433.9	431.5
Nebraska	2	3,636,254 71	181,812,735	1,019,949	7,272.51	373,912	370,837	490.2	430.5
Nevada	4	471,624.63	11,790,615	957,795	1,500.00	25,000	24,507	481.1	448.8
New Hampshire	2 & 3	1,268,907.01	45,769,601	.....	.....	96,009	92,505	494.7	450.9
New Jersey (6 Mos.)	2	4,097,985.38	204,142,990	34,613,878	10,944.68	712,396	681,644	†*544.5	.....
New Mexico	3 & 5	1,415,689.77	30,117,191	0	20,322.80	59,291	55,506	542.6	491.6
North Carolina	4	8,786,682.39	219,667,060	324,615	*8,786.68	430,499	399,632	549.6	527.8
North Dakota	2	1,275,564.86	63,778,243	19,903,406	*6,000.00	160,701	159,261	400.4	501.8
Ohio	2 & 3	19,910,480.77	770,657,796	*2,055,000	*20,000.00	1,570,734	1,540,367	500.3	434.2
Oklahoma	3	7,224,276.29	248,256,916	0	*18,000.00	503,126	506,563	490.0	452.2
Oregon	3	3,670,948.93	130,884,079	.....	8,386.03	244,572	239,353	546.8	525.3
Pennsylvania	2 & 3	17,296,332.47	691,562,015	0	.....	1,554,915	1,509,088	458.2	423.2
Rhode Island	1 & 2	916,139.93	56,153,739	5,284,108	3,704.34	118,014	113,580	494.4	482.7
South Carolina	5	5,018,001.20	100,360,024	.....	*5,000.00	199,635	190,301	527.3	509.0
South Dakota	3 & 4	2,380,020.85	65,552,032	12,247,430	9,796.93	169,552	168,891	388.1	393.6
Tennessee	3	4,472,000.00	148,951,780	*400,000	*27,950.00	294,567	287,103	518.8	489.9
Texas	1 & 3	15,650,840.60	594,592,079	0	*25,000.00	1,111,407	1,079,304	550.9	518.6
Utah	3½	1,461,261.27	41,773,659	0	3,750.00	93,976	87,804	475.7	479.4
Vermont	2 & 3	905,244.13	33,167,246	0	.....	79,527	76,699	432.4	385.5
Virginia	4½	7,139,706.92	158,423,951	8,358,944	6,299.99	337,607	319,170	496.3	432.6
Washington	2	3,821,438.49	191,071,925	13,272 637	*5,000.00	384,583	375,838	508.4	494.2
West Virginia	3½ & 4	3,794,067.52	99,917,717	2,736,386	12,500.00	245,819	233,410	428.1	381.2
Wisconsin	2	6,047,110.64	302,355,532	11,231,192	13,750.00	698,289	680,308	444.4	410.5
Wyoming	2½ & 3	753,279.84	25,888,746	.....	917.58	51,955	50,794	509.6	469.6
Total		$258,192,195.91	9,747,513,532	231,418,381	$563,999.83	20,495,290	19,998,615	‡515.4	455.4

*Estimated in part. †Illinois total gallonage for year estimated at 705,191,873 and New Jersey at 371,169,073. ‡Estimate of full year's gallonage in Illinois and New Jersey used in reaching this figure.

gallons, an increase of 1,604,840,005 gallons, or 20.5 per cent over the 7,822,935,040 gallons accounted for in this group in 1926. The Bureau of Mines reported a gain in total consumption of only 12.1 per cent last year over 1926 consumption.

The Bureau of Public Roads, Department of Commerce, estimates the total gasoline consumed last year by motor vehicles was 10,596,000,000 gallons. On the average number of automobiles registered last year this would mean an average consumption 469.1 gallons per car last year. The average between registrations at the beginning and the end of the year was 22,587,136 passenger cars, trucks and buses.

Average consumption per car as indicated by the tax reports was lower last year than in 1926 in Arkansas, District of Columbia, Florida, Maryland, North Dakota, South Dakota, and Utah. The largest gains were in California and Georgia. Florida's average consumption fell more than 200 gallons per car.

Consumption of gasoline in the states that have taxes was in the following order, as regards volume: 1 California, 2 Ohio, 3 Illinois, (estimated in part), 4 Pennsylvania, and 5 Michigan. Consumption in each of these states exceeded 500,000,000 gallons. Consumption in California almost reached 1,200,000,000 gallons, or almost 10 per cent of the total gasoline consumed in the United States last year.

Consumption in New York may be larger than California consumption because New York last year had a total of 1,937,918 motor vehicles registered, compared with California's 1,693,195, and many taxicabs and trucks in metropolitan New York are operated 24 hours a day. However, the severe winters in part of New York state, where motoring is greatly curtailed several months each year, may bring down the state's total gasoline consumption below that of California

Drive-In Station and Gasoline Gallonage Distribution

	†Stations	Gallonage
S. O. New York territory..	21,860	‡359,841,661
Maine	1,170	72,005,774
New Hampshire	750	45,769,601
Vermont	420	33,167,246
Massachusetts	4,800	‡.....
Rhode Island	840	56,153,739
Connecticut	2,040	152,745,301
New York	11,840	‡.....
Atlantic Refining territory	8,800	714,677,689
Pennsylvania	8,490	691,562,015
Delaware	310	23,115,674
S. O. New Jersey territory	11,510	1,122,433,648
New Jersey	4,500	*371,169,073
Maryland	1,350	118,335,211
District of Columbia	.....	54,560,612
Virginia	1,620	158,423,951
West Virginia	1,350	99,917,717
North Carolina	1,850	219,667,060
South Carolina	840	100,360,024
S. O. Ohio Territory: Ohio	8,510	770,657,796
S. O. Kentucky territory....	6,980	855,898,626
Kentucky	1,600	118,272,732
Mississippi	890	118,617,816
Alabama	1,000	148,610,102
Georgia	1,400	218,987,895
Florida	2,090	251,410,081
S. O. California territory..	13,710	1,570,507,187
California	9,750	1,196,543,641
Oregon	1,420	130,884,079
Washington	2,090	191,071,925
Nevada	90	11,790,615
Arizona	360	40,216,927

	†Stations	Gallonage
S. O. Indiana territory.....	34,170	3,195,356,739
Michigan	5,030	588,151,670
Indiana	4,500	337,826,393
Illinois	9,600	*705,191,873
Wisconsin	2,510	302,355,532
Minnesota	1,730	275,512,870
Iowa	3,070	309,098,000
Missouri	3,970	322,219,262
North Dakota	500	63,778,243
South Dakota	740	65,552,032
Kansas	2,520	225,670,864
S. O. Nebraska territory:		
Nebraska	1,630	181,812,735
S. O. Louisiana territory....	3,490	383,664,974
Tennessee	1,320	148,951,780
Louisiana	1,190	150,767,050
Arkansas	980	83,946,144
Magnolia territory	10,590	842,848,995
Texas	6,650	594,592,079
Oklahoma	3,940	248,256,916
Continental territory	3,720	309,631,438
Montana	680	47,009,800
Idaho	420	42,348,935
Wyoming	270	25,888,746
Utah	550	41,773,659
Colorado	1,510	122,493,107
New Mexico	290	30,117,191
Total U. S.	124,970	‡9,747,513,532

*Estimated in part. †From S. F. Bowser survey. ‡New York and Massachusetts not available.

Comparative Gasoline Gallonage, Compiled from Tax Reports

(Data Collected by American Petroleum Institute)

	Alabama		Arizona		Connecticut		Delaware		District of Columbia	
	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons
January	9,276,000	8,416,000	2,626,000	2,261,000	8,121,000	7,446,000	1,179,000	680,000	3,879,000	3,417,000
February	9,437,000	8,519,000	2,595,000	2,379,000	7,717,000	5,739,000	1,589,000	1,542,000	3,619,000	3,156,000
March	10,915,000	9,441,000	2,812,000	2,474,000	10,063,000	8,440,000	1,716,000	1,286,000	4,422,000	3,908,000
April	11,453,000	10,599,000	3,017,000	2,518,000	12,863,000	10,155,000	1,807,000	1,031,000	4,841,000	4,269,000
May	12,462,000	11,102,000	3,061,000	2,711,000	14,474,000	12,580,000	1,476,000	2,594,000	5,313,000	4,688,000
June	12,298,000	10,682,000	3,175,000	2,869,000	15,299,000	13,284,000	3,016,000	1,776,000	5,495,000	4,573,000
July	13,599,000	12,304,000	3,230,000	2,846,000	17,139,000	15,047,000	2,284,000	1,819,000	5,260,000	4,802,000
August	14,170,000	11,960,000	3,528,000	2,774,000	16,972,000	14,402,000	2,593,000	2,144,000	5,090,000	4,571,000
September	13,665,000	11,467,000	4,068,000	2,846,000	15,891,000	13,318,000	2,411,000	1,418,000	5,073,000	4,454,000
October	14,091,000	11,450,000	4,283,000	2,896,000	15,091,000	12,366,000	2,089,000	2,407,000	5,223,000	4,537,000
November	13,358,000	10,910,000	4,321,000	3,014,000	13,917,000	11,890,000	2,167,000	1,831,000	4,839,000	4,408,000
December	12,501,000	11,082,000	4,521,000	3,021,000	12,406,000	9,802,000	1,946,000	1,465,000	4,750,000	4,218,000
Total	147,225,000	127,932,000	41,237,000	32,609,000	159,953,000	134,469,000	24,273,000	19,993,000	57,804,000	51,001,000
Per Cent of Gain	15.0		26.4		18.9		21.4		13.3	

	Florida		Georgia		Idaho		Indiana		Iowa	
	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons
January	25,119,000	26,181,000	16,370,000	13,433,000	1,430,000	1,876,000	22,576,000	20,556,000	16,847,000	14,938,000
February	22,597,000	26,685,000	12,486,000	11,498,000	1,944,000	1,641,000	19,394,000	15,484,000	15,249,000	14,171,000
March	23,844,000	25,785,000	12,412,000	12,221,000	2,231,000	2,547,000	19,457,000	20,314,000	18,381,000	16,138,000
April	21,807,000	28,262,000	15,609,000	13,734,000	3,084,000	2,959,000	25,256,000	20,590,000	‡42,049,000	20,703,000
May	20,741,000	25,192,000	16,771,000	14,962,000	3,671,000	3,457,000	27,793,000	23,819,000	25,381,000	23,426,000
June	20,778,000	24,269,000	15,143,000	13,639,000	4,194,000	4,015,000	31,643,000	28,616,000	25,363,000	23,761,000
July	17,416,000	22,160,000	16,507,000	13,840,000	4,927,000	4,569,000	33,020,000	29,318,000	‡35,075,000	26,320,000
August	18,767,000	22,072,000	17,116,000	16,130,000	5,379,000	4,765,000	35,094,000	31,600,000	28,751,000	27,439,000
September	19,568,000	20,979,000	17,433,000	15,550,000	4,691,000	4,248,000	36,886,000	32,222,000	29,405,000	23,844,000
October	17,285,000	20,425,000	18,075,000	15,151,000	4,559,000	3,745,000	34,703,000	29,259,000	27,515,000	23,722,000
November	19,382,000	21,796,000	17,250,000	15,226,000	3,565,000	3,213,000	33,738,000	28,582,000	25,432,000	19,593,000
December	20,944,000	23,051,000	17,090,000	14,820,000	2,668,000	2,385,000	30,435,000	25,624,000	19,650,000	16,949,000
Total	247,248,000	286,857,000	192,262,000	170,204,000	43,343,000	39,420,000	349,995,000	305,984,000	309,098,000	251,004,000
Per Cent of Gain	†13.8		12.9		9.9		14.3		23.1	

†Loss.

	Kentucky		Louisiana		Maine		Maryland		Michigan	
	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons
January	6,103,000	6,166,000	11,672,000	8,886,000	1,617,000	1,596,000	7,831,000	6,823,000	34,180,000	30,507,000
February	6,046,000	6,561,000	10,640,000	10,212,000	1,642,000	1,106,000	7,406,000	6,085,000	32,243,000	30,062,000
March	7,484,000	6,230,000	11,785,000	9,538,000	1,947,000	1,140,000	11,274,000	8,138,000	40,703,000	33,095,000
April	8,585,000	7,826,000	12,440,000	11,467,000	4,463,000	2,143,000	9,408,000	9,777,000	47,404,000	38,710,000
May	10,299,000	10,005,000	12,346,000	11,416,000	6,933,000	5,762,000	11,111,000	10,740,000	51,836,000	50,028,000
June	10,831,000	9,678,000	11,751,000	11,242,000	8,767,000	7,420,000	12,072,000	11,285,000	58,536,000	51,197,000
July	12,298,000	10,987,000	12,884,000	12,219,000	10,325,000	9,454,000	13,009,000	12,060,000	65,157,000	57,584,000
August	12,852,000	10,784,000	13,625,000	12,150,000	11,244,000	9,843,000	13,480,000	11,504,000	72,397,000	58,685,000
September	12,292,000	10,216,000	13,737,000	12,323,000	9,513,000	8,366,000	13,033,000	11,438,000	58,744,000	53,257,000
October	11,745,000	9,269,000	14,117,000	12,297,000	8,163,000	7,104,000	12,008,000	10,601,000	63,616,000	50,037,000
November	10,384,000	8,821,000	13,414,000	11,758,000	6,282,000	5,334,000	10,916,000	10,123,000	37,216,000	45,696,000
December	9,354,000	7,306,000	13,194,000	11,921,000	3,842,000	2,884,000	9,952,000	9,302,000	31,340,000	39,048,000
Total	118,273,000	103,849,000	151,605,000	135,429,000	74,738,000	62,152,000	131,500,000	117,876,000	593,372,000	537,906,000
Per Cent of Gain	13.9		11.9		20.2		11.5		10.3	

	Minnesota		Mississippi		Missouri		Nebraska		Nevada	
	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons
January	12,148,000	15,450,000	8,336,000	6,619,000	19,783,000	17,961,000	10,869,000	9,247,000	618,000	531,000
February	14,627,000	13,964,000	7,499,000	6,988,000	18,764,000	17,224,000	10,386,000	9,512,000	659,000	546,000
March	19,728,000	13,728,000	8,241,000	8,501,000	23,091,000	20,918,000	11,302,000	11,829,000	925,000	745,000
April	22,077,000	21,325,000	8,923,000	7,581,000	31,058,000	24,401,000	11,741,000	12,656,000	907,000	790,000
May	25,937,000	26,513,000	9,094,000	9,066,000	28,153,000	25,624,000	14,867,000	13,280,000	1,047,000	962,000
June	29,754,000	25,943,000	9,321,000	8,773,000	28,054,000	27,698,000	14,709,000	13,866,000	1,272,000	1,088,000
July	31,909,000	30,492,000	10,989,000	10,395,000	29,703,000	29,721,000	17,831,000	15,759,000	1,579,000	1,158,000
August	34,757,000	29,521,000	11,608,000	10,127,000	31,025,000	29,727,000	18,519,000	16,154,000	1,312,000	1,191,000
September	31,831,000	27,556,000	11,129,000	9,886,000	32,122,000	26,112,000	16,908,000	13,954,000	1,331,000	1,096,000
October	27,515,000	25,612,000	11,203,000	10,157,000	27,982,000	24,521,000	15,457,000	14,015,000	1,122,000	1,009,000
November	24,888,000	20,418,000	11,028,000	8,863,000	27,767,000	23,675,000	14,478,000	11,338,000	1,018,000	904,000
December	14,515,000	15,625,000	10,385,000	8,931,000	24,717,000	22,167,000	12,610,000	11,177,000	930,000	820,000
Total	289,686,000	266,147,000	117,756,000	105,887,000	322,219,000	289,749,000	169,677,000	152,787,000	12,720,000	10,840,000
Per Cent of Gain	8.8		11.2		11.2		11.0		17.3	

	New Hampshire		New Mexico		No. Carolina		Ohio		Oklahoma	
	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons
January	1,449,000	1,450,000	2,013,000	1,474,000	16,291,000	15,916,000	41,631,000	39,711,000	16,455,000	16,783,000
February	1,319,000	1,016,000	1,985,000	1,493,000	16,441,000	14,672,000	43,041,000	37,733,000	15,762,000	14,817,000
March	1,757,000	1,195,000	1,903,000	1,619,000	14,928,000	13,482,000	54,046,000	45,142,000	18,934,000	14,774,000
April	3,587,000	1,838,000	2,348,000	1,852,000	13,715,000	14,062,000	64,460,000	53,059,000	19,147,000	15,380,000
May	3,788,000	3,686,000	2,543,000	2,217,000	16,552,000	14,519,000	75,841,000	64,455,000	21,645,000	15,499,000
June	4,818,000	4,295,000	2,763,000	2,071,000	20,302,000	17,310,000	69,232,000	64,639,000	23,078,000	18,518,000
July	5,797,000	5,367,000	2,861,000	2,417,000	18,645,000	16,611,000	77,973,000	71,738,000	24,435,000	18,800,000
August	6,345,000	5,791,000	3,098,000	2,571,000	18,916,000	16,496,000	76,926,000	69,490,000	23,682,000	22,218,000
September	5,257,000	4,789,000	2,762,000	2,448,000	20,403,000	18,195,000	75,620,000	66,408,000	23,539,000	20,972,000
October	4,586,000	3,945,000	2,980,000	2,319,000	21,834,000	18,220,000	71,274,000	60,567,000	22,032,000	19,686,000
November	3,766,000	3,207,000	2,847,000	2,280,000	21,053,000	17,518,000	62,721,000	56,382,000	21,228,000	17,835,000
December	3,253,000	2,343,000	2,551,000	1,996,000	20,503,000	17,661,000	58,036,000	50,833,000	21,525,000	19,081,000
Total	45,722,000	38,922,000	30,654,000	24,757,000	219,583,000	194,662,000	770,801,000	680,157,000	251,462,000	214,363,000
Per Cent of Gain	17.4		23.8		12.8		13.3		17.3	

	Oregon		Rhode Island		South Carolina		Tennessee		Texas	
	*1927 Gallons	*1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons
January	6,564,000	6,449,000	3,576,000	3,136,000	6,551,000	6,423,000	9,156,000	7,965,000	41,961,000	33,139,000
February	6,973,000	6,371,000	3,182,000	2,663,000	6,379,000	6,241,000	8,235,000	7,720,000	38,413,000	35,962,000
March	8,974,000	8,802,000	4,109,000	3,628,000	7,421,000	6,868,000	10,299,000	9,441,000	45,803,000	35,837,000
April	10,469,000	9,372,000	4,976,000	4,226,000	8,173,000	7,730,000	11,667,000	10,045,000	45,092,000	39,022,000
May	11,337,000	9,995,000	6,406,000	5,287,000	8,415,000	7,442,000	13,009,000	10,900,000	49,185,000	43,014,000
June	12,375,000	11,367,000	5,218,000	5,237,000	8,320,000	7,396,000	13,161,000	11,415,000	50,100,000	45,011,000
July	14,505,000	13,071,000	6,509,000	6,154,000	9,114,000	8,208,000	14,451,000	12,803,000	53,255,000	49,304,000
August	14,946,000	12,763,000	6,615,000	5,919,000	9,633,000	8,322,000	14,988,000	13,262,000	56,342,000	50,658,000
September	13,029,000	11,653,000	5,759,000	5,270,000	9,419,000	8,072,000	14,557,000	12,628,000	52,520,000	48,985,000
October	11,944,000	10,681,000	5,367,000	4,891,000	9,627,000	7,895,000	14,041,000	11,702,000	53,660,000	45,729,000
November	10,291,000	9,466,000	4,984,000	4,631,000	9,665,000	7,744,000	12,932,000	11,215,000	54,131,000	44,985,000
December	9,478,000	8,502,000	4,735,000	4,181,000	9,055,000	7,772,000	12,456,000	10,035,000	50,985,000	42,995,000
Total	130,885,000	118,492,000	61,436,000	55,223,000	101,772,000	90,113,000	148,952,000	129,131,000	591,447,000	514,641,000
Per Cent of Gain	10.4		11.2		12.9		15.3		14.9	

*Gasoline and distillate.

Comparative Gasoline Gallonage, Compiled from Tax Reports

(Data Collected by American Petroleum Institute)

	Utah		Vermont		Virginia		Washington		W. Virginia	
	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons
January	2,630,000	2,495,000	888,000	826,000	9,252,000	8,588,000	11,205,000	10,268,000	4,375,000	3,578,000
February	2,025,000	2,015,000	877,000	690,000	9,504,000	7,900,000	12,310,000	11,126,000	4,526,000	3,456,000
March	2,360,000	2,355,000	1,225,000	681,000	11,783,000	9,689,000	14,433,000	14,273,000	6,186,000	4,413,000
April	3,511,000	2,767,000	2,252,000	976,000	13,184,000	11,627,000	16,870,000	15,083,000	7,552,000	6,447,000
May	3,594,000	3,741,000	3,622,000	2,544,000	14,380,000	12,509,000	17,803,000	16,087,000	8,795,000	8,774,000
June	4,112,000	3,610,000	3,310,000	3,255,000	15,070,000	12,961,000	19,045,000	17,560,000	10,270,000	8,517,000
July	4,699,000	2,609,000	4,228,000	3,905,000	16,099,000	14,181,000	21,119,000	19,065,000	11,327,000	9,894,000
August	4,285,000	3,993,000	4,727,000	4,086,000	17,043,000	14,257,000	22,140,000	19,032,000	11,367,000	9,601,000
September	4,059,000	3,714,000	4,071,000	3,596,000	16,414,000	14,009,000	19,341,000	17,465,000	11,296,000	9,418,000
October	4,388,000	3,187,000	3,643,000	3,098,000	15,703,000	12,848,000	17,920,000	16,133,000	10,641,000	8,345,000
November	3,227,000	2,918,000	2,378,000	2,431,000	14,405,000	12,599,000	16,252,000	14,916,000	9,076,000	7,393,000
December	2,884,000	2,512,000	1,946,000	1,567,000	13,945,000	11,698,000	14,983,000	14,029,000	7,244,000	5,910,000
Total	41,774,000	35,916,000	33,167,000	27,655,000	166,782,000	142,866,000	203,421,000	185,037,000	102,655,000	85,746,000
Per Cent of Gain	16.3		19.9		16.7		9.9		19.7	

where motoring is curtailed only slightly in winter.

In the tax and inspection figures collected by the American Petroleum Institute and republished here from the A. P. I. Bulletin, Arizona is shown to have used more gasoline, with the exception of the short month of February, in each succeeding month last year. Its December gallonage was 72 per cent more than its January gallonage.

Thirty-nine states and the District of Columbia reported total collection costs at $563,999.83. This group collected, after refunds, $239,754,995.67, at an average cost of $4.23 per $1000 collected. Seven states gave no collection figures or estimates.

Nine states allowed last year a fee to oil companies to cover collection costs, losses and shrinkages. Arizona, Indiana and New Mexico allowed 1 per cent; Nebraska 2 per cent; Michigan Minnesota, Missouri and Oklahoma 3 per cent, and South Dakota 4 per cent.

According to a survey made for S. F. Bowser & Co., Fort Wayne, Ind., by Peat, Marwick, Mitchell & Co., New York, there were 124,970 drive-in service stations July 1, 1927, to handle the automobile trade. This number of outlets was exclusive of curb pumps, garages and other dealers.

An accompanying table shows the distribution of these pumps by marketing territories and states, together with the gallonage as revealed by the tax reports.

This table shows the gallonage of the Standard Oil Co. of Indiana territory was almost double that of any other territory for which complete gasoline statistics are available. It is likely that the Indiana territory gallonage would exceed the Standard Oil Co. of New York territory by about 50 per cent were gasoline statistics available for New York and Massachusetts.

The figures also indicate that, where gallonage is spread over a wide territory, there are relatively fewer drive-in service stations than where the gallonage is more concentrated, with the exception of California.

	Wisconsin		Wyoming		Illinois	New Jersey*
	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1927 Gallons
January	12,887,000	13,083,000	1,394,000	975,000	.....	.....
February	13,820,000	11,598,000	1,282,000	1,050,000	.....	.....
March	18,046,000	12,771,000	1,433,000	1,263,000	.....	.....
April	24,351,000	19,828,000	1,611,000	2,225,000	.....	.....
May	29,200,000	25,240,000	2,113,000	2,235,000	.....	.....
June	32,615,000	28,704,000	2,771,000	2,203,000	.....	.....
July	36,037,000	32,496,000	3,387,000	2,780,000	.....	33,305,000
August	37,614,000	31,970,000	3,217,000	2,896,000	61,343,000	38,356,000
September	33,090,000	28,200,000	2,749,000	2,314,000	69,984,000	36,728,000
October	30,790,000	26,712,000	2,437,000	2,133,000	66,325,000	33,837,000
November	26,000,000	21,342,000	2,070,000	1,684,000	59,564,000	31,752,000
December	19,136,000	16,738,000	1,754,000	1,421,000	55,184,000	30,165,000
Total	313,586,000	268,682,000	26,218,000	23,179,000	.....	.....
Per Cent of Gain	16.7		13.1		....	....

	California		Montana		Pennsylvania	
	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons
First Quarter	218,816,000	199,495,000	5,300,000	7,822,000	131,456,000	115,775,000
Second Quarter	270,333,000	228,400,000	11,716,000	12,609,000	173,629,000	146,846,000
Third Quarter	273,754,000	244,915,000	18,153,000	16,657,000	204,325,000	184,956,000
Fourth Quarter	254,778,000	233,078,000	18,079,000	11,524,000	182,147,000	140,802,000
Total	1,017,681,000	905,888,000	53,248,000	48,612,000	691,557,000	588,379,000
Per Cent of Gain	12.3		9.5		17.5	

Oil Cheap Among 45 Products

WASHINGTON, May 26.—Among 45 representative commodities on which wholesale prices are collected by the Bureau of Labor Statistics of the U. S. Department of Labor, prices of petroleum products were second lowest in the list during March and April, in relation to their 1926 prices. Prices of rubber were the cheapest.

Index numbers for petroleum products rose, however, from 66.6 in March to 69.0 in April. Rubber was 55.0 in March and 41.5 in April of this year. Corresponding 1926 prices represent 100.

The highest index number was on hides and skins, which was 167.3 in April and 157.3 in March.

Comparative Gasoline Gallonage, Compiled from Inspection Reports

(Data Collected by American Petroleum Institute)

	Arkansas		Colorado		Kansas		North Dakota		South Dakota	
	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons	1927 Gallons	1926 Gallons
January	7,156,000	7,927,000	8,157,000	6,550,000	16,619,000	14,123,000	2,276,000	4,295,000	5,135,000	4,232,000
February	6,493,000	6,755,000	7,482,000	6,536,000	16,075,000	14,061,000	4,254,000	4,210,000	4,572,000	3,953,000
March	6,280,000	6,978,000	7,813,000	7,540,000	19,687,000	18,659,000	4,296,000	5,088,000	6,791,000	6,188,000
April	6,208,000	8,266,000	*14,814,000	8,719,000	14,419,000	17,164,000	6,324,000	6,662,000	5,158,000	6,527,000
May	8,900,000	9,463,000	8,590,000	9,831,000	23,818,000	20,526,000	7,059,000	7,573,000	6,915,000	7,643,000
June	8,745,000	8,409,000	11,338,000	10,170,000	28,024,000	23,819,000	8,884,000	6,585,000	8,895,000	6,732,000
July	9,020,000	8,963,000	13,912,000	11,460,000	31,847,000	29,270,000	8,507,000	6,832,000	8,047,000	7,231,000
August	9,596,000	8,973,000	13,906,000	12,612,000	28,029,000	25,986,000	12,445,000	9,743,000	11,517,000	8,498,000
September	11,641,000	9,379,000	13,004,000	11,839,000	28,307,000	22,569,000	15,246,000	9,567,000	11,309,000	7,647,000
October	7,969,000	9,613,000	10,844,000	9,938,000	23,096,000	18,685,000	11,119,000	7,869,000	8,448,000	7,343,000
November	9,170,000	7,210,000	10,352,000	9,083,000	21,512,000	18,473,000	5,941,000	4,823,000	7,403,000	5,418,000
December	8,216,000	8,172,000	8,972,000	8,102,000	19,182,000	17,482,000	2,290,000	2,724,000	3,841,000	4,065,000
Total	99,394,000	100,108,000	129,184,000	112,380,000	270,615,000	240,817,000	88,641,000	75,971,000	88,031,000	75,477,000
Per Cent of Gain	†0.7		14.9		12.3		16.6		16.6	

†Loss.

Standard Oil Company of Louisiana

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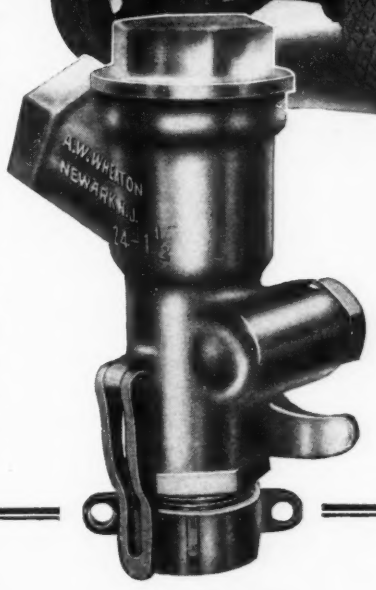

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Compilation Of Mid-Continent Refinery Operations

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National Petroleum News

Mid-Continent Refinery Operations Week Ended May 25 (By Telegraph)

	Kansas	Oklahoma	North & Cent. Texas	North La.-Ark.	Total Week Ended May 25	Total Week Ended Apr. 27
Plants Reporting	12	28	28	12	80	80
Crude Capacity (bbls.)	92,000	157,200	112,500	54,900	416,600	416,600
Cracking Capacity	30,700	52,600	16,200	22,700	122,200	122,200
Da. Av. Crude Runs	62,980 — 5.8	106,563 — 10.3	85,265 + 3.1	60,674 + 4.7	315,482 — 3.3	295,715
Da. Av. Other Oils	8,763 + 61.4	5,459 +283.4	8,433 + 24.0	710 + 6.9	23,365 + 63.2	10,848
GASOLINE—Gallons						
Stocks, May 18	14,964,000	50,691,000	16,691,000	4,526,000 + 2.4	86,872,000	102,305,000
Prod. 5-18 to 5-25	9,711,000 + 3.9	17,307,000 — 7.9	10,637,000 + 15.4	5,744,000 — 0.03	43,399,000 + 1.0	39,574,000
Ship. 5-18 to 5-25	10,398,000 + 9.5	20,631,000 — 13.5	11,639,000 + 23.8	5,916,000 — 3.8	48,584,000 — 0.2	42,813,000
Stocks, May 25	14,277,000 — 4.6	47,367,000 — 6.6	15,689,000 — 6.0	4,354,000	81,687,000 — 6.0	99,066,000
Ratio Sales to Prod	107.1%	119.2%	109.4%	103.0%	111.9%	108.2%
KEROSENE—Gallons						
Stocks, May 18	4,348,000	4,023,000	1,540,000	521,000	10,432,000	10,290,000
Prod. 5-18 to 5-25	2,006,000 + 4.2	2,542,000 — 20.2	1,454,000 — 3.6	454,000 + 71.3	6,456,000 — 6.2	6,703,000
Ship. 5-18 to 5-25	1,758,000 + 0.9	2,465,000 — 7.2	1,484,000 + 5.0	361,000 — 12.8	6,068,000 — 2.5	6,862,000
Stocks, May 25	4,596,000 + 5.7	4,100,000 + 1.9	1,510,000 — 1.9	614,000 + 17.9	10,820,000 + 3.7	10,131,000
Ratio Sales to Prod	87.6%	97.0%	102.1%	79.5%	94.0%	102.4%
STOVE DISTILLATE—Gallons						
Stocks, May 18	1,501,000	1,979,000	199,000	57,000	3,736,000	4,601,000
Prod. 5-18 to 5-25	350,000 +144.8	219,000 + 8.4	203,000 — 3.8	104,000 + 22.4	876,000 + 36.7	770,000
Ship. 5-18 to 5-25	175,000 — 59.7	138,000 + 16.0	103,000 — 52.5	107,000 + 16.3	523,000 — 39.3	1,260,000
Stocks, May 25	1,676,000 + 11.7	2,060,000 + 4.1	299,000 + 50.3	54,000 — 5.3	4,089,000 + 9.4	4,111,000
Ratio Sales to Prod	50.0%	63.0%	50.7%	102.9%	59.7%	163.6%
GAS OIL—Gallons						
Stocks, May 18	7,614,000	31,691,000	2,542,000	5,327,000	47,174,000	46,981,000
Prod. 5-18 to 5-25	2,048,000 + 0.6	2,122,000 + 50.9	912,000 — 14.6	1,845,000 — 3.4	6,927,000 + 7.9	5,602,000
Ship. 5-18 to 5-25	1,956,000 + 33.2	807,000 +170.1	1,191,000 + 4.3	1,931,000 + 9.5	6,885,000 + 36.5	5,880,000
Stocks, May 25	7,706,000 + 1.2	32,006,000 + 1.0	2,263,000 — 11.0	5,241,000 — 1.6	47,216,000 + 0.1	46,703,000
Ratio Sales to Prod	95.5%	85.2%	130.6%	104.7%	99.4%	105.0%
FUEL OIL—Gallons						
Stocks, May 18	15,295,000	39,447,000	36,037,000	19,537,000	110,316,000	103,573,000
Prod. 5-18 to 5-25	7,441,000 — 2.2	7,124,000 — 18.6	12,673,000 + 6.7	9,035,000 + 3.5	36,273,000 — 1.9	32,289,000
Ship. 5-18 to 5-25	6,571,000 + 2.2	6,226,000 — 11.3	10,610,000 + 2.8	7,642,000 — 15.0	31,049,000 — 5.2	33,552,000
Stocks, May 25	16,165,000 + 5.7	40,345,000 + 2.3	38,100,000 + 5.7	20,930,000 + 7.1	115,540,000 + 4.7	102,310,000
Ratio Sales to Prod	88.3%	87.4%	83.7%	84.6%	85.6%	103.9%

Gasoline Produced by Various Methods, Week Ended May 25

	Kansas	% of Total	Oklahoma	% of Total	Texas	% of Total	Louisiana-Arkansas	% of Total	Total	% of Total
Straight Run	6,421,000	66.1	12,781,000	73.8	8,392,000	78.9	2,648,000	46.1	30,242,000	69.7
Cracked	2,621,000	27.0	3,443,000	19.9	1,726,000	16.2	2,529,000	44.0	10,319,000	23.8
Natural	669,000	6.9	1,083,000	6.3	519,000	4.9	567,000	9.9	2,838,000	6.5
Total	9,711,000		17,307,000		10,637,000		5,744,000		43,399,000	

+ or — columns are % change from previous week. *Revised

Mid-Continent Gasoline Shipments Continue at High Rate

Staff Special—By Telegraph
TULSA, May 29

SHIPMENTS of gasoline from 80 refineries in the Mid-Continent continued at the high rate of the last month in the week ended May 25. Reporting plants shipped 48,584,000 gallons of gasoline in the seven days as compared with 48,674,000 gallons in the week ended May 18 and 45,270,000 gallons in the week ended May 11.

In the last four weeks shipments of gasoline from the 80 plants totaled 183,324,000 gallons, an average of 45,831,000 gallons a week. In the corresponding period a year ago shipments of gasoline totaled 149,049,000 gallons, an average of 37,262,000 gallons a week. Shipments this year have been more than 1,000,000 gallons a day larger than a year ago. The increase has been 23 per cent.

In the four-week period gasoline stocks have been reduced 17,379,000

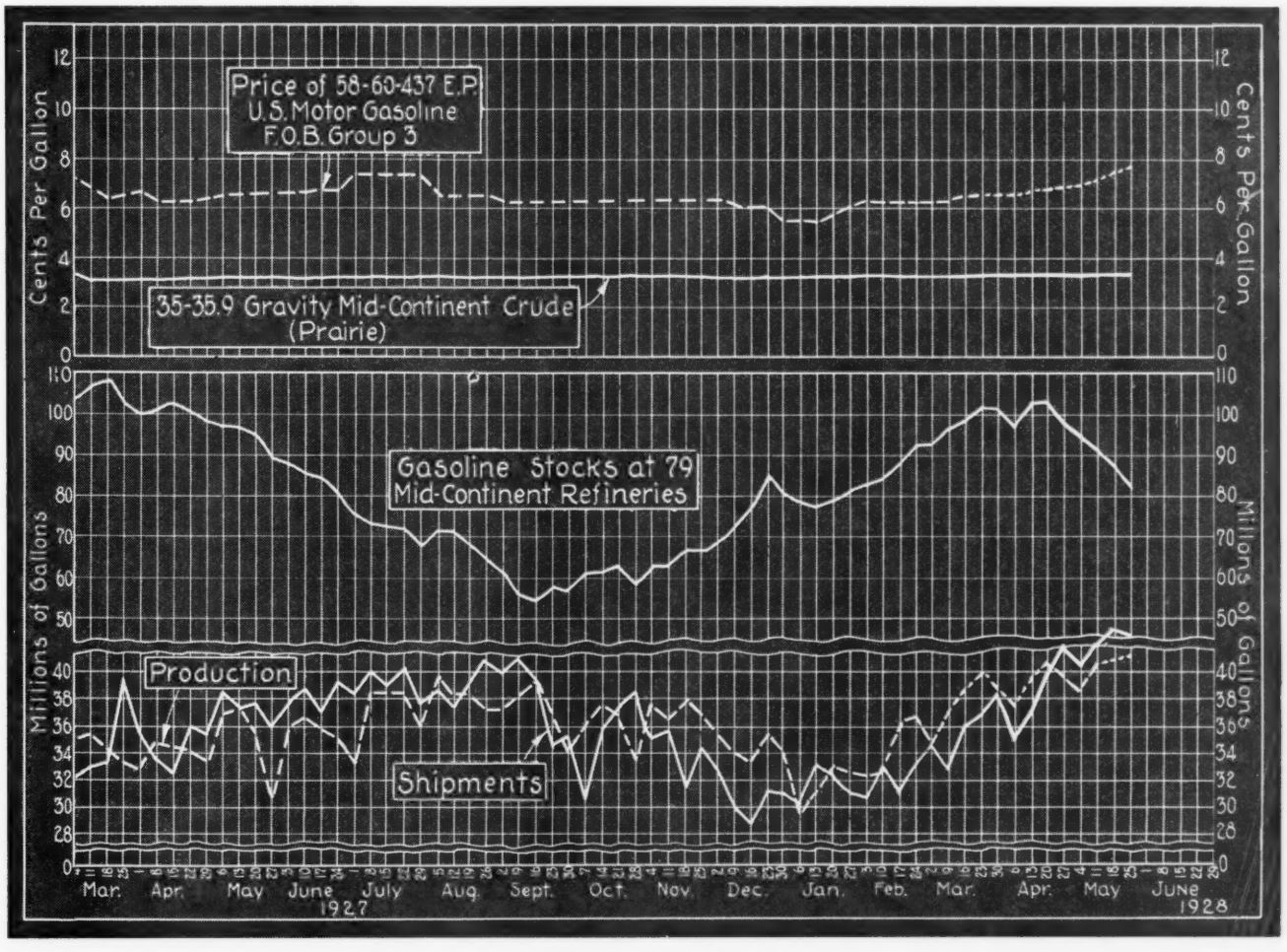
Summary for the Month

Production and shipments, all reporting refineries, for four weeks ended May 25. Change in stocks figured from April 27.

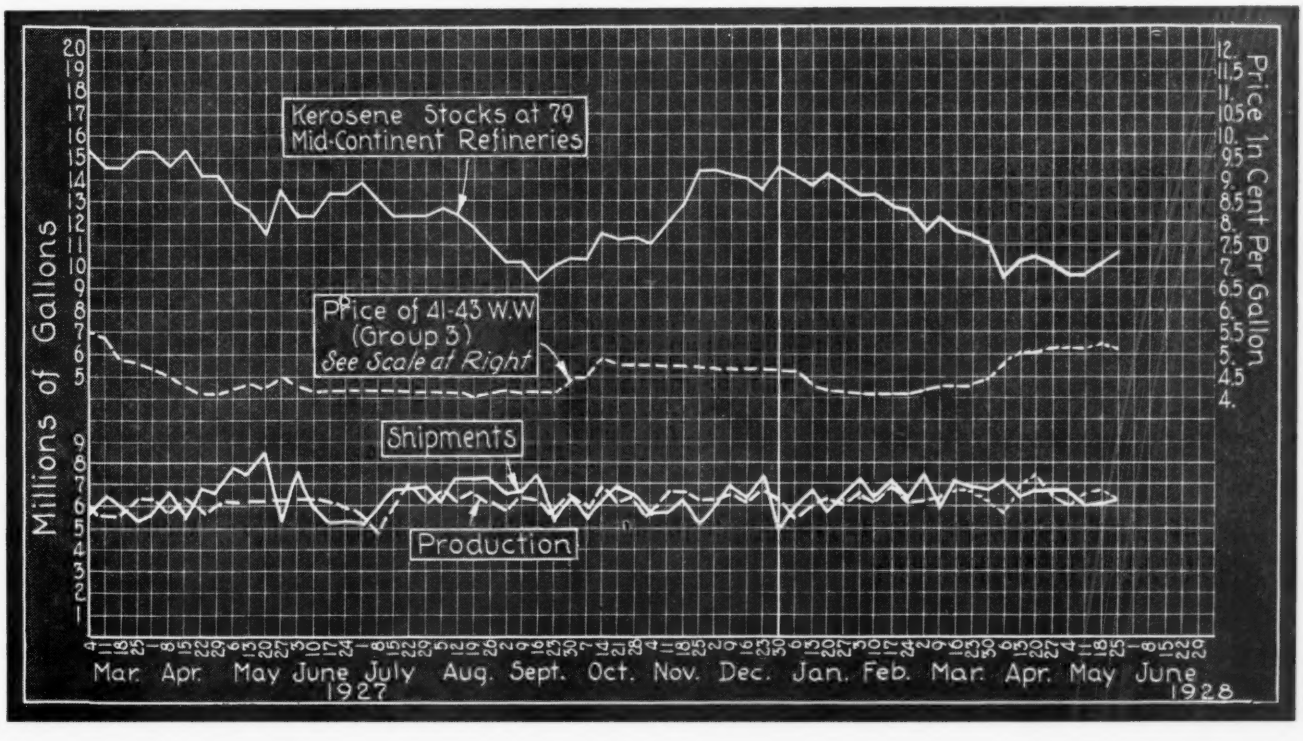
	Gallons
GASOLINE	
Production	165,945,000
Shipments	183,324,000
Net change in stocks	—17,379,000
Ratio sales to production	110.5%
KEROSENE	
Production	25,785,000
Shipments	25,096,000
Net change in stocks	+689,000
Ratio sales to production	97.3%
STOVE DISTILLATE	
Production	3,329,000
Shipments	3,351,000
Net change in stocks	—22,000
Ratio sales to production	100.7%
GAS OIL	
Production	27,191,000
Shipments	26,678,000
Net change in stocks	+513,000
Ratio sales to production	98.1%
FUEL OIL	
Production	140,831,000
Shipments	127,601,000
Net change in stocks	+13,230,000
Ratio sales to production	90.6%

Barometer of Mid-Continent Refinery Market—Week Ending May 25

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 80 Plants to National Petroleum News

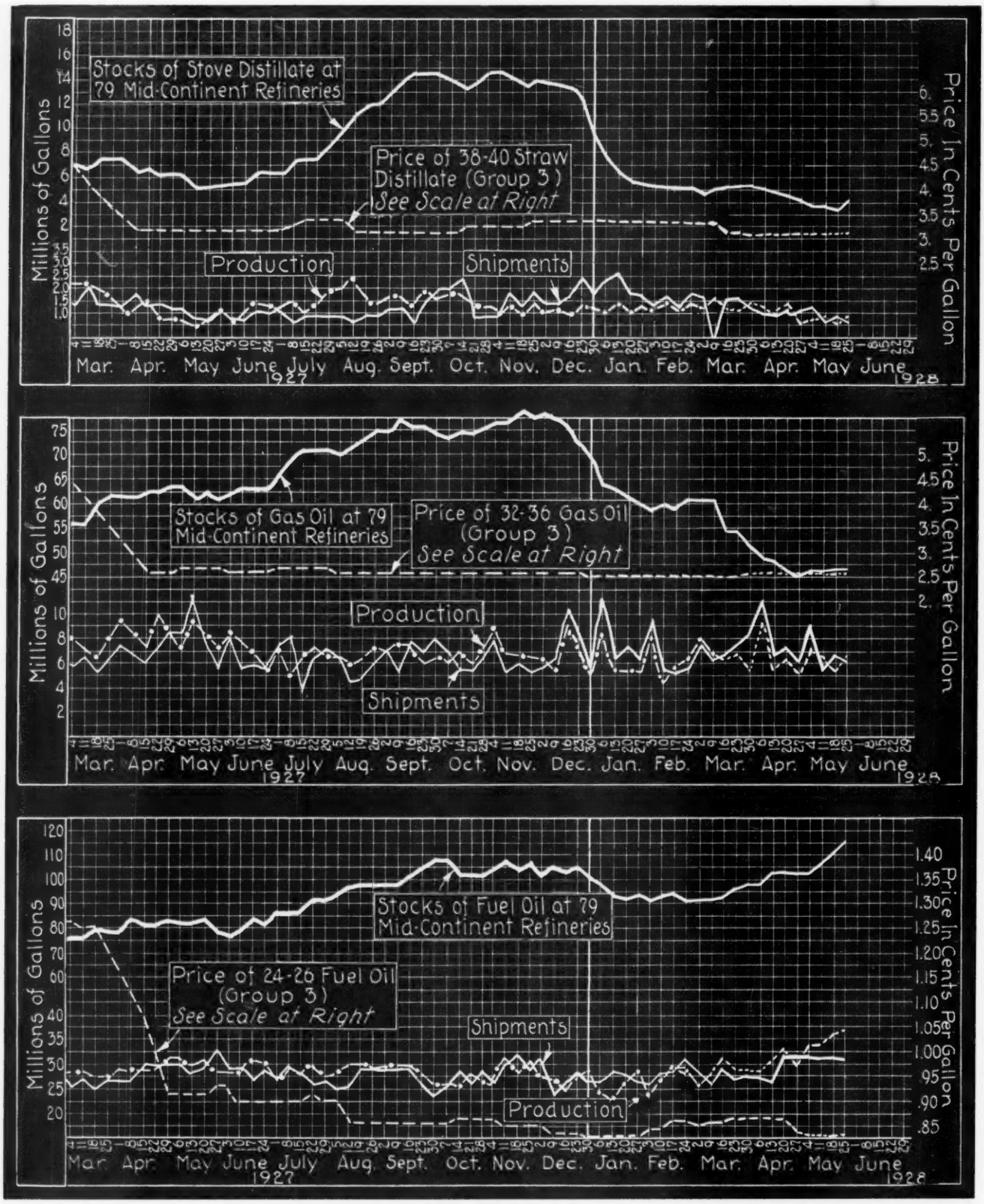

Price of 58-60-437 E.P. U.S. Motor Gasoline F.O.B. Group 3
35-35.9 Gravity Mid-Continent Crude (Prairie)
Cents Per Gallon
Gasoline Stocks at 79 Mid-Continent Refineries
Millions of Gallons
Production
Shipments
Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June
1927
1928

Prices shown above are extended to date shown in Refinery Market and Crude tables in Market section of this issue and stocks, shipments and Production are extended to date shown in table on opposite page

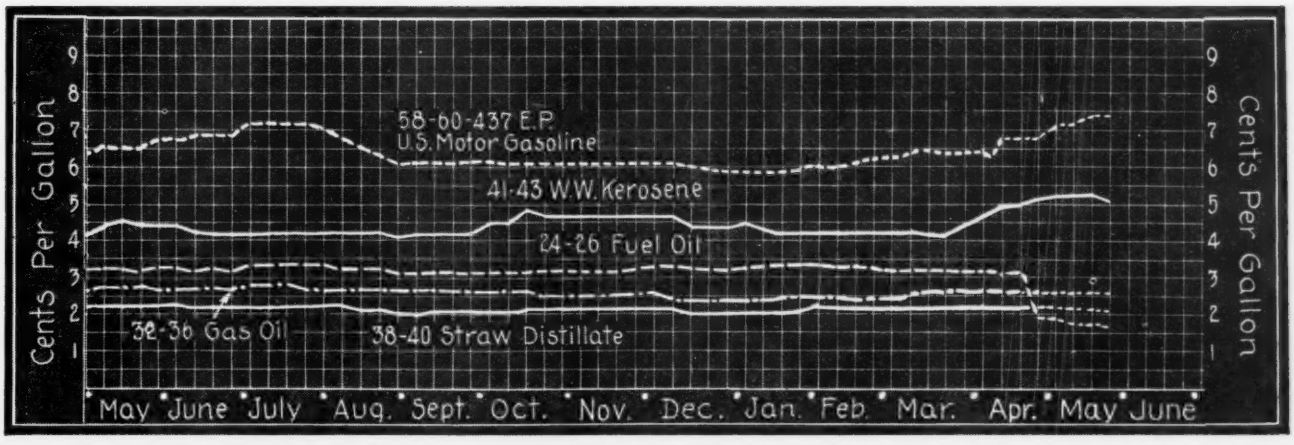

Kerosene Stocks at 79 Mid-Continent Refineries
Price of 41-43 W.W (Group 3) See Scale at Right
Millions of Gallons
Price In Cent Per Gallon
Shipments
Production
Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June
1927
1928

Barometer of Mid-Continent Refinery Market—Week Ending May 25

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 80 Plants to National Petroleum News


Millions of Gallons
Price In Cents Per Gallon
Stocks of Stove Distillate at 79 Mid-Continent Refineries
Price of 38-40 Straw Distillate (Group 3) See Scale at Right
Production
Shipments
Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June
1927
1928
Millions of Gallons
Price In Cents Per Gallon
Stocks of Gas Oil at 79 Mid-Continent Refineries
Price of 32-36 Gas Oil (Group 3) See Scale at Right
Production
Shipments
Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June
1927
1928
Millions of Gallons
Price In Cents Per Gallon
Stocks of Fuel Oil at 79 Mid-Continent Refineries
Price of 24-26 Fuel Oil (Group 3) See Scale at Right
Shipments
Production
Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June
1927
1928

Current Prices of Principal Mid-Continent Refined Products


Cents Per Gallon
58-60-437 E.P. U.S. Motor Gasoline
41-43 W.W. Kerosene
24-26 Fuel Oil
32-36 Gas Oil
38-40 Straw Distillate
May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June

Prices shown are on Group 3 basis and extended to date shown in Refinery Market Tables Section of this Issue

gallons while in the corresponding period last year the stock reduction totaled only 3,733,000 gallons.

In the week just ended gasoline stocks were reduced 5,200,000 gallons to 81,687,000 gallons. May 27, 1927, stocks held by the same group of plants totaled 95,238,000 gallons. Current stocks represent a little less than 12 days' supply. A year ago stocks represented 17.6 days' supply.

Last week shipments from Oklahoma refineries fell about 3,000,000 gallons. Kansas refiners, however, reported an increase in gasoline business of nearly 1,000,000 gallons. North and central Texas refiners showed an increase in shipments of more than 2,000,000 gallons. Shipments from Louisiana and Arkansas plants were virtually at the same level both weeks.

Despite the fall in shipments Oklahoma refiners withdrew 3,300,000 gallons of gasoline from storage. This was due chiefly to the fact that production in that state was cut down nearly 1,500,000 gallons or 7.9 per cent.

Crude runs in the field were reduced 11,000 barrels daily average. Charges of partly refined oils were increased 9000 barrels, however, so that production of finished goods was not changed greatly. Oklahoma refiners reduced their crude runs 12,000 barrels daily average to 106,563 barrels a day. Kansas refiners reduced runs slightly. Increases were reported in other fields.

Kerosene business fell slightly but production was decreased by about the same amount as shipments. Total stocks May 25 were 10,820,000 gallons, an increase of about 400,000 gallons. A year ago kerosene stocks totaled 13,186,000 gallons.

Production of stove distillate was increased 220,000 gallons during the week to 876,000 gallons. At the same time shipments fell about 300,000 gallons to 523,000 gallons. Total stocks were increased about 350,000 gallons to 4,089,000 gallons. Stocks a year ago were 5,982,000 gallons.

Gas oil demand was almost exactly equal to the new supply. Stocks May 25 were 47,216,000 gallons as compared with 47,174,000 gallons May 18.

Fuel oil stocks continued to mount as has been the case recently. Production for the week was 36,273,000 gallons and shipments 31,049,000 gallons, causing stocks to increase 5,200,000 gallons to 115,540,000 gallons. The rate of stock increase was about the same in all fields. A year ago stocks totaled 78,338,000 gallons.

Exposition is Officially Recognized

TULSA, May 26.—Thoroughgoing endorsement and pledge of support of the International Petroleum Exposition, to be held in Tulsa, Oct. 20-29, inclusive, has been given by several trade and technical associations and by the national congress.

During the past week the senate adopted the joint resolution introduced in the house of representatives by Congressman E. B. Howard, of Tulsa. This resolution asks President Coolidge to authorize the state department to extend an official invitation to all foreign governments to name delegates to the exposition. This action gives the exposition official recognition.

Also, the past week saw endorsement of the show by the Natural Gasoline Association of America. Two weeks earlier the Natural Gas Department of the American Gas Association adopted a similar resolution and earlier than that the Mid-Continent Oil Scouts Association and the Tulsa Geological Society had officially pledged support to the exposition.

The Petroleum Division of the American Institute of Mining and Metallurgical Engineers has set tentative dates of Oct. 18 and 19 for its semi-annual meeting at Tulsa.

General Manager J. Burr Gibbons says about two-thirds of the exposition space has been reserved. Certain of the portable structures on the grounds will be moved to other locations, adding considerable open-air exhibit space for this fall's show.

Weighted Average Prices Oklahoma Market

In line with National Petroleum News' new policy of carrying a weighted average price for the four more important Oklahoma gasolines in its market section, these weighted average prices, together with the number of cars of each grade sold, as of Monday, May 28, are published below. The figures are not available for publication in the refinery market table on page 98 of this issue.

	Total Cars	Weighted Average
58-60 U. S. Motor, 437 e. p.	153	7.5449
60-62, 437 e. p.	8	7.6718
60-62, 400 e. p.	5	7.7500
64-66, 375 e. p.	6	7.8958

Note: Above prices are in cents per gallon, f.o.b. Oklahoma refinery, in tank car lots.

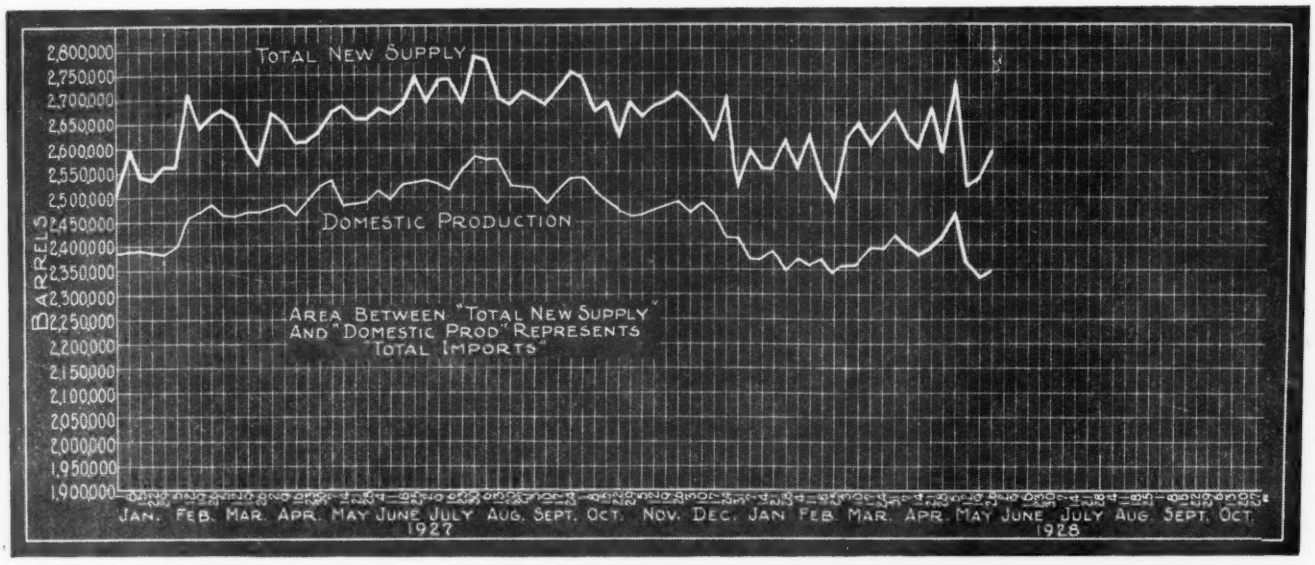
Late Tank Wagon Changes

(By Telegraph)

LOUISVILLE, May 29.—On May 28 Standard Oil Co. of Kentucky advanced the service station price of gasoline 1 cent at Savannah, Ga., to 21 cents, including 4 cent state tax. On May 27 it reduced the service station price of gasoline 1 cent at Covington, to 21 cents, including 5 cent state tax. Tank wagon is unchanged at both points at 19 cents and 20 cents respectively.

On May 10 it reduced kerosene price 1 cent at Louisville, making tank wagon price 14 cents. These prices supersede those published in the tank wagon table on page 101 of this issue.

Daily Average Crude Oil Production and Imports



Daily average gross output of United States, by fields, for week ending with dates below as compiled by American Petroleum Institute

PRODUCTION SUMMARY

	May 26	May 19
Production east of Rockies	**1,713,950**	**1,707,000**
Increase		**6,950**
Total production in U. S.	**2,350,750**	**2,339,000**
Increase		**11,750**
Crude oil imports	**248,000**	**195,857**
Increase		**52,143**
Total crude supply	**2,598,750**	**2,534,857**
Increase		**63,893**

OKLAHOMA	May 26	May 19
North Braman	3,050	3,000
South Braman	1,600	1,600
Blackwell	3,650	3,650
Hubbard	2,900	2,900
Thomas	1,350	1,450
Tonkawa	13,800	13,750
Garber	8,600	8,600
Burbank	33,650	34,350
Osage, outside Burbank	28,650	28,700
Watchorn	800	800
Cushing	20,300	20,300
Yale Jennings	9,050	9,050
Davenport	2,000	2,000
Bristow-Slick	23,750	23,800
North Okmulgee	15,500	15,500
Lyons-Deaner	6,700	6,500
Stroud	1,050	1,000
Cromwell	9,600	9,700
Papoose	4,350	4,450
Wewoka	6,800	6,950
Seminole	52,300	52,750
Bowlegs	63,900	66,300
Searight	14,250	14,800
Little River	51,300	45,050
Earlsboro	92,800	95,200
Duncan district	6,750	6,800
Graham	5,800	5,800
Fox	1,700	1,700
Healdton	13,950	13,900
Hewitt	9,000	9,000
Scholem Alechem	14,300	14,000
Others	86,250	86,700
Total, Oklahoma	609,450	610,050
Decrease		600

KANSAS		
Greenwood County	29,400	29,300
Florence-Covert	1,350	1,400
Peabody-Elbing	3,600	3,600
Eldorado-Towanda	14,050	14,050
Augusta-Fox-Bush	4,050	4,050
Rainbow Bend	1,600	1,600
Russell	3,650	3,200
Churchill	12,500	11,800
Oxford	13,400	14,400
Others	24,850	24,750
Total, Kansas	108,450	108,150
Increase		300

NORTH LOUISIANA		
Homer	4,400	4,450
Haynesville	6,250	6,250
Caddo, light	10,000	10,000
Caddo, heavy	3,650	3,750
De Soto, Red River	4,150	4,050
Elm Grove	550	550
Bellevue	1,050	1,050
Cotton Valley, light	1,900	1,900
Cotton Valley, heavy	4,300	4,300
Urania	6,650	6,750
Pleasant Hill	650	550
Total, North Louisiana	43,550	53,600
Decrease		50

ARKANSAS		
El Dorado	5,250	5,300
Champagnolle	16,200	7,350
Smackover, light	7,900	7,800
Smackover, heavy	60,850	61,250
Stephens	1,050	1,050
Nevada	1,400	1,550
Lisbon	2,200	2,200
Others	100	100
Total, Arkansas	94,950	86,600
Increase		8,350

TEXAS (Outside Gulf Coast)		
Panhandle District		
Hutchinson County	39,000	38,900
Carson County	6,900	7,250
Gray County	18,150	18,800
Wheeler County	1,050	1,000
Others	250	250
Total, Panhandle District	65,350	66,200
Decrease		850
North Texas		
Burkburnett	11,000	11,250
Electra	12,800	12,550
Iowa Park and K-M-A	3,750	3,500
Wilbarger	12,750	12,500
Archer County	22,000	22,400
Montague-Cooke	12,150	12,000
Others	650	600
Total, North Texas	75,100	74,800
Increase		300
West Central Texas		
Stephens County	8,200	8,150
Eastland-Desdemona	7,500	7,350
Brown County	12,750	12,600
Coleman County	1,800	1,750
Callahan County	3,700	3,750
Shackleford County	9,850	10,000
Young County	6,950	7,700
Throckmorton County	1,000	1,000
Palo Pinto County	400	400
Jack County	1,400	1,450
Others	650	650
Total, West Central Texas	54,200	54,800
Decrease		600
West Texas		
Jones County	1,350	1,250
Mitchell and Scurry Counties	3,000	3,000
Howard County	4,200	4,300
Reagan County	17,600	17,700
Crane and Upton Counties	66,000	68,900
Crockett County	1,950	2,400
Pecos County	52,500	51,200
Winkler County	143,050	143,600
Others	1,700	1,750
Total, West Texas	291,350	294,100
Decrease		2,750
Mexia	7,000	7,100
Currie	550	550
Richland	550	550
Wortham	1,950	1,950
Corsicana-Powell	11,200	11,250
Nigger Creek	1,250	1,250
Total, East Central Texas	22,500	22,650
Decrease		150
Southwest Texas		
Luling	13,200	13,450
Lytton Springs	1,400	1,450
Somerset	700	700
Laredo District	5,850	6,000
Piedras Pintas		
Dale	1,300	1,400
Others	400	400
Total, Southwest Texas	22,850	23,400
Decrease		550
Total, Texas—(Outside Gulf Coast)	531,350	535,950
Decrease		4,600

GULF COAST		
Coastal Texas		
West Columbia	7,950	8,250
Damon Mound	950	900
Big Creek	1,500	1,500
Boling	2,800	2,800
Blue Ridge	8,000	8,200
Pierce Junction	14,950	13,700
Humble	1,000	1,000
Goose Creek	7,200	7,100
South Liberty	4,300	3,800
Hull	13,300	13,000
Saratoga	1,100	1,100
Batson	1,350	1,400
Barber's Hill	700	550
Sour Lake	3,500	3,500
Spindletop	39,450	38,200
Orange County	4,200	4,500
Others	2,500	2,250
Total, Coastal Texas	114,750	111,750
Increase		3,000
Coastal Louisiana		
Vinton	4,700	4,500
Lockport	4,100	4,050
Evangeline	950	1,000
East Hackberry	3,800	4,100
Edgerly	1,200	1,100
Others	3,200	3,500
Total, Coastal Louisiana	17,950	18,250
Decrease		300
Total Gulf Coast	132,700	130,000
Increase		2,700

ROCKY MOUNTAIN		
Wyoming		
Salt Creek	40,750	37,950
Grass Creek	2,500	2,500
Elk Basin	1,050	1,100
Big Muddy	2,600	2,700
Lost Soldier	4,000	5,000
Rock Creek	2,600	2,450
Lance Creek	700	750
Teapot Dome		
Others	6,150	7,300
Total, Wyoming	60,350	59,750
Increase		600
Montana		
Cat Creek	1,750	1,750
Sunburst	8,800	9,600
Others	150	150
Total, Montana	10,700	11,500
Decrease		800
Colorado		
Moffat (Craig)	1,350	1,450
Fort Collins	2,650	2,700
Florence	1,400	1,100
Others	1,000	1,050
Total, Colorado	6,400	6,300
Increase		100
New Mexico		
Table Mesa	100	
Hogback	400	500
Artesia	1,250	1,200
Rattlesnake	600	700
Others	200	200
Total New Mexico	2,550	2,600
Decrease		50
Total, Rocky Mountain	80,000	80,150
Decrease		150

CALIFORNIA		
Santa Fe Springs	36,000	36,500
Long Beach	190,000	184,000
Huntington Beach	56,000	56,000
Torrance	18,000	18,500
Dominguez	12,000	12,000
Rosecrans	6,000	6,000
Inglewood	29,000	29,000
Midway-Sunset	73,500	73,500
Ventura Avenue	47,500	47,000
Seal Beach	37,000	37,500
Others	131,800	132,000
Total California	636,800	632 000
Increase		4,800
EASTERN		
(Including Ill., Ind., Ky., O., W. V., Pa., and N. Y.)	113,500	112,500
Increase		1,000

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New Plan Would Restrict Drill[illegible]

Hold Production Down in Little River

By Lawrence E. Smith
N. P. N. STAFF WRITER

TULSA, May 26

THE wholesale testing of wildcat territory by cooperative effort is getting to the point in Oklahoma where it is almost commonplace.

Early in the past week operators in the northwest extension of the Allen pool met and selected 18 tentative locations in advance of production, agreeing to contribute to each other on their drilling. No great number of these will be drilled right away, but as new exploratory work is necessary because of advance in production or short term leases, agreements will be set up between operators.

The plan had its first wholesale application in the territory south of the Little River pool, Seminole county, where 10 test wells were started shortly after March 1. Each operator who drilled a test well was guaranteed $10,000 return from each of the offset owners in the event a dry hole was completed. In return for this pledge, the operator drilling the well agreed to produce only 50 barrels for an agreed-on period.

The entire program of 10 wells in the south Little River area has been completed. Only two of the tests were failures and the others, with initial production ranging from 2500 to 8000 barrels, prove territory of such scope as practically to assure peak production of 100,000 barrels upward, if the proven area were to be drilled in the hurried manner common to most pools of its caliber.

The majority opinion, however, favors restriction—in fact, is insistent upon it. The first agreement covering the area had May 15 as its expiration date, it was extended for 30 days. Unanimous consent could not be obtained for a further extension of the shut down on drilling and a compromise plan has been drawn for submission to a meeting of Little River operators May 29.

It will be recommended by the operators' committee and the umpire that drilling start at any time without waiting for the June 15 expiration date of the agreement, but that no wells be drilled into the Wilcox sand prior to Aug. 15. If any should enter the sand, it shall be completely shut in until Aug. 15. On that date the shut in wells in the area, which now number 15, will be opened to production.

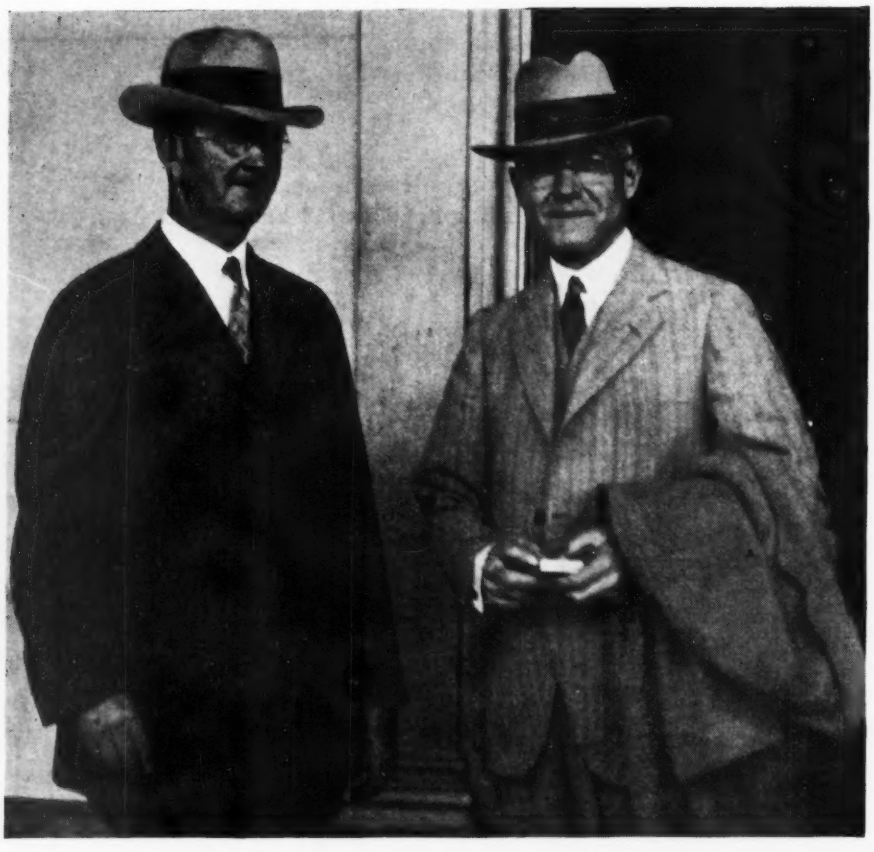
The proposed agreement provides, however, that the area be divided into units of 40 acres each, that not more than two strings of tools be started to each unit and that the production of each unit shall be held to not more than 1600 barrels daily for five months. Twenty-acre tracts will be considered as one-half unit, being allowed one well in the crop next to be started and a maximum production of 800 barrels daily.

It will be recommended that no wells other than those allotted to each unit be started in the area prior to Aug. 15 and that the next crop to be started on or after that date be withheld from completion until Nov. 1.

A readjustment of the boundary lines of the area covered by the agreement* is also being recommended. As first established, the north line of the zone takes in the south row of locations in the north half of 11-7-6. It probably will be moved to the line between Secs. 11 and 2, or three locations north. Recent developments just outside the zone penalize through drainage the operators who are just within the zone and unable to drill. For example, just north of the boundary line, the Pure Oil Co. has a well in the NE NW NE of Sec. 11 making 3000 barrels, and two locations south and just inside the zone which is restricted as to drilling is the north line of Blackwell Oil & Gas Co.'s lease. It has been agreed by the Pure Oil Co. and the Roxana Petroleum Corp., who are outside the zone, that the Blackwell shall have 45 days drilling time on its well before the other two start drilling offsets. This illustrates the compromises that have to be worked out from time to time in all these agreements.

Operators in the several other areas where shut down agreements are in force met May 24 and agreed to drill eight test wells on leases that will expire soon unless wells are

(*Continued on Page* 46)



Legal lights and operating men foregather in the oil business when conservation measures are discussed. Judge D. A. Richardson, Oklahoma City, left, is counsel for the Marland Companies. W. C. Franklin of the Tidal Oil Co., Tulsa, is at the right

*Map of area on page 18, May 9 issue, NATIONAL PETROLEUM NEWS.

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Seminole District Production by Companies and Leases, May 23 and May 16, 1928

BOWLEGS

Company	Farm	S. T. R.	May 23 Wells	May 23 Prod.	May 16 Wells	May 16 Prod.
Amerada	Rascoe	15- 8-6	8	1,495	8	1,555
Atlantic	Baker	1- 8-6	4	335	4	380
Atlantic	Fleet	23- 8-6	3	140	3	400
Atlantic	Grayson	21- 8-6	4	394	4	575
Atlantic	A. Jones	10- 8-6	2	90	2	90
Atlantic	C. Jones	9- 8-6	2	239	2	390
Total Atlantic			16	1,198	16	1,835
Barnsdall	McNac	28- 8-6	1	23	1	24
Barnsdall	Murrow	11- 8-6	4	810	4	846
Total Barnsdall			5	833	5	870
Carter	Bowlegs	15- 8-6	4	1,220	4	1,555
Carter	Burden	23- 8-6	3	245	3	210
Carter	Harjoche	15- 8-6	6	620	6	615
Carter	Hilly	23- 8-6	3	605	3	650
Carter	Jones	11- 8-6	4	1,025	4	1,040
Carter	McGeisey	21- 8-6	1	20	1	20
Carter	Mecco	9- 8-6	1	65	1	120
Carter	Walker	15- 8-6	4	565	4	540
Carter	Wise	23- 8-6	11	2,405	11	2,460
Total Carter			38	6,770	38	7,210
Dixie	Culley	11- 8-6	1	0	1	170
Empire	Lacey	15- 8-6	6	459	6	398
Empire	Wise	23- 8-6	2	375	2	275
Total Empire			8	834	8	673
Gypsy	Bowlegs	22- 8-6	1	112	1	175
Gypsy	Bradley	8- 8-6	1	10	1	2
Gypsy	Cumsey	8- 8-6	4	1,075	4	1,155
Gypsy	*Dosar	7- 8-6	1	100	1	100
Gypsy	Grayson	13- 8-6	4	552	4	720
Gypsy	Harjoche	10- 8-6	2	1,255	2	1,570
Gypsy	Jones	11- 8-6	1	0	1	227
Gypsy	Walker	15- 8-6	8	1,647	8	1,657
Gypsy	Wise	23- 8-6	2	267	2	292
Total Gypsy			24	5,018	24	5,898
I. T. I. O.	Barnett	23- 8-6	2	360	2	237
I. T. I. O.	Barnett-B	24- 8-6	1	26	1	221
I. T. I. O.	Billington	22- 8-6	5	759	5	673
I. T. I. O.	Bowlegs	22- 8-6	10	1,553	10	1,287
I. T. I. O.	Davis	22- 8-6	4	866	4	839
I. T. I. O.	Fay	13- 8-6	9	2,339	9	2,238
I. T. I. O.	Goforth	15- 8-6	12	1,415	12	1,484
I. T. I. O.	Livingston	15- 8-6	10	3,357	10	3,288
I. T. I. O.	Lizzie	13- 8-6	3	58	2	258
I. T. I. O.	Walker	15- 8-6	8	866	8	834
I. T. I. O.	Wilmott	15- 8-6	4	382	4	382
I. T. I. O.	Work	24- 8-6	1	129	1	124
I. T. I. O.	Youngblood	24- 8-6	2	178	2	166
Total I. T. I. O.			71	12,268	70	12,031
Magnolia	Davis	13- 8-6	3	515	3	486
Magnolia	Davis-M	13- 8-6	1	293	1	220
Magnolia	Hammond	10- 8-6	5	889	5	888
Magnolia	Rhodes	12- 8-6	5	3,676	5	3,780
Magnolia	Van Buskirk	9- 8-6	1	299	1	258
Total Magnolia			15	5,672	15	5,632
McCulloch	Bowlegs	22- 8-6	2	392	2	420
Mid-Continent	Baker	10- 8-6	4	1,169	4	1,201
Mid-Continent	Bowlegs	22- 8-6	1	40	1	45
Mid-Continent	Smith	12- 8-6	6	385	6	465
Total Mid-Continent		12- 8-6	11	1,594	11	1,711
Minnehoma	Bowlegs	15- 8-6	4	264	4	275
Prairie	Gahagan	23- 8-6	4	102	4	207
Prairie	Harber	10- 8-6	8	2,770	8	2,655
Prairie	Jones	11- 8-6	4	425	4	415
Prairie	Templeton	12- 8-6	6	2,490	6	2,665
Prairie	Whitney	23- 8-6	4	400	4	375
Total Prairie			26	6,178	26	6,317
Pure	Reed	14- 8-6	14	2,832	14	2,702
Pure	Strother-D	14- 8-6	4	672	4	704
Pure	Strother-F	10- 8-6	4	1,676	4	1,796
Total Pure			22	5,180	22	5,202
Roxana	Taylor	16- 8-6	5	431	5	468
Shaffer	Lacy	14- 8-6	3	200	3	307
Sinclair	Bowlegs	22- 8-6	1	90	1	75
Sinclair	Cumsey	10- 8-6	4	3,123	4	3,352
Sinclair	Ellen	11- 8-6	7	1,089	7	1,079
Sinclair	Harjo	14- 8-6	3	645	3	470
Sinclair	Jones	10- 8-6	7	1,975	7	2,175
Sinclair	Taylor	10- 8-6	4	2,041	4	2,055
Sinclair	Taylor-W	10- 8-6	2	1,256	2	1,425
Sinclair	Walker	22- 8-6	4	972	4	995
Total Sinclair			32	11,191	32	11,626
Texas	Reed	14- 8-6	11	1,880	11	2,060
Tidal	Grayson	13- 8-6	4	535	4	465
Tidal	Harjoche	10- 8-6	6	1,355	6	1,565
Total Tidal			10	1,890	10	2,030
Twin State	Jones	11- 8-6	3	62	3	70
TOTAL BOWLEGS			313	63,349	312	66,360

EARLSBORO

Company	Farm	S. T. R.	May 23 Wells	May 23 Prod.	May 16 Wells	May 16 Prod.
Amerada	Anderson	15- 9-5	2	1,060	2	1,100
Amerada	Cowden	4- 9-5	7	1,835	7	1,790
Amerada	Rogers	3- 9-5	2	1,050	2	1,170
Total Amerada			11	3,945	11	4,060
Atlantic et al	Foreman	18- 9-5	1	160	1	160
Barnsdall	Brown	10- 9-5	4	2,146	4	2,494
Barnsdall	F. Bruner	2- 9-5	2	821	2	771
Barnsdall	N. Bruner	10- 9-5	4	1,115	4	1,288
Barnsdall	Cudjo	14- 9-5	1	26	1	25
Barnsdall	D. Davis	11- 9-5	3	334	3	313
Barnsdall	J. Davis	11- 9-5	4	1,145	4	1,275
Barnsdall	M. Davis	11- 9-5	3	107	3	109
Barnsdall	Gibson	9- 9-5	8	2,983	8	3,123
Barnsdall	Hern	15- 9-5	1	3	1	4
Barnsdall	Ingram	1- 9-5	8	2,938	8	3,365
Barnsdall	Pack	10- 9-5	4	187	4	197
Barnsdall	Peter	10- 9-5	4	278	4	289
Barnsdall	Sango	1- 9-5	5	6,985	5	7,055
Barnsdall	Sebolka	15- 9-5	1	550	1	321
Barnsdall	H. Sullivan	11- 9-5	1	15	1	0
Barnsdall	Sull-Harjo	10- 9-5	2	45	2	44
Barnsdall	Watsutke	12- 9-5	4	1,824	4	1,930
Total Barnsdall			60	21,502	60	22,603
Carter	Davis	13- 9-5	2	475	2	465
Carter	Payne	12- 9-5	3	3	3	5
Carter	Sango	1- 9-5	4	1,190	4	1,255
Total Carter			9	1,668	9	1,725
Continental	Kays	2- 9-5	2	95	2	65
Continental	Spencer	12- 9-5	4	1,455	4	1,420
Total Continental			6	1,550	6	1,485
Crosbie	Bryant	9- 9-5	2	0	2	0
Empire	Barker	12- 9-5	1	540	1	600
Empire	Edmundson	3- 9-5	3	210	3	408
Total Empire			4	750	6	1,008
Gypsy	Bruner	10- 9-5	4	2,235	4	2,250
Gypsy	B. Carter	11- 9-5	9	2,795	9	3,317
Gypsy	Earl	16- 9-5	1	17	1	20
Gypsy	Hunick	5- 9-5	1	2,092	1	2,185
Gypsy	Noble	12- 9-5	4	3,352	4	3,150
Gypsy	Peter	10- 9-5	3	342	3	322
Gypsy	Sango	1- 9-5	5	4,432	5	4,282
Gypsy	State	16- 9-5	4	1,185	4	897
Total Gypsy			31	16,628	31	16,423
Independent	Bruner	10- 9-5	4	50	4	322
Independent	Sullivan	10- 9-5	2	120	2	144
Independent	Knapp	8- 9-5	4	2,216	4	2,247
Indep.-Margay	Gaines	11- 9-5	4	1,000	4	726
Total Independent			14	2,386	14	3,439
Magnolia	Bryant	9- 9-5	6	1,058	6	970
Magnolia	Cowden	4- 9-5	4	70	4	75
Magnolia	Edmundson	3- 9-5	3	30	3	30
Magnolia	Holmsley	11- 9-5	7	743	8	541
Magnolia	Hyde	13- 9-5	1	1,584	1	1,770
Magnolia	Ingram	10- 9-5	1	30	1	25
Magnolia	Lena	10- 9-5	3	70	3	80
Magnolia	Seay	12- 9-5	9	3,580	9	3,764
Magnolia	Simpson	10- 9-5	3	261	3	190
Magnolia	Sparks	11- 9-5	7	680	7	710
Magnolia	Sullivan	12- 9-5	3	92	3	104
Total Magnolia			48	8,198	49	8,259
Mid-Continent	McCumber	9- 9-5	7	210	7	265
Mid-Kansas	Anderson	14- 9-5	3	140	3	145
Phillips	Dunnaway	14- 9-5	1	25	1	30
Phillips	Gram	9- 9-5	3	130	3	145
Total Phillips			4	155	4	175
Prairie	*Baker	24- 9-5	1	50	1	50
Prairie	Davis	13- 9-5	5	3,310	5	3,345
Prairie	C. Graham	3- 9-5	2	15	2	40
Prairie	O. Graham	10- 9-5	4	1,410	4	1,195
Prairie	Stidham	11- 9-5	13	4,030	13	4,565
Total Prairie			25	8,815	25	9,195
Roxana	Bayliss	17- 9-5	1	12	1	15
Roxana	Spencer	12- 9-5	2	903	2	1,034
Total Roxana			3	915	3	1,049
Shaffer	Clark	1- 9-5	5	727	5	878
Sinclair	Foreman	18- 9-5	1	15	1	15
Sinclair	Hollins	12- 9-5	2	50	2	50
Sinclair	Sango	2- 9-5	3	4,090	3	4,525
Total Sinclair			6	4,155	6	4,590
Skelly	Sherry	6- 9-5	1	4,073	1	4,158
Skelly	Spencer	12- 9-5	1	621	1	604
Total Skelly			2	4,694	2	4,762
Superior	Walker	2- 9-5	1	4,314	1	4,410
Texas	Anderson	2- 9-5	7	500	7	605
Texas	Texas Brown	10- 9-5	8	1,945	8	1,920
Texas	Rogers	5- 9-5	4	3,430	4	3,435
Texas	Wilmott	10- 9-5	7	470	7	435
Total Texas			26	6,145	26	6,395
Tidal	Watkins	9- 9-5	8	3,295	8	3,450
Twin State	Barker	12- 9-5	2	115	3	70
Twin State	Hern	2- 9-5	4	1,330	4	1,275
Total Twin State			6	1,445	7	1,345
TOTAL EARLSBORO			281	92,817	285	95,826

LITTLE RIVER

Company	Farm	S. T. R.	May 23 Wells	May 23 Prod.	May 16 Wells	May 16 Prod.
Amerada	Nitey	2- 7-6	3	2,245	3	2,320
Amerada et al	Fore	35- 8-6	2	575	2	600
Total Amerada			5	2,820	5	2,920
Barnsdall	Hotulke	22- 7-6	1	35	1	34
Blackwell	Nitey	35- 8-6	6	2,906	6	2,749
Carter	Fish	36- 8-6	6	1,180	6	1,345
Carter	Jackson	11- 7-6	2	2,375	2	2,565
Carter	*Larner	24- 7-6	1	1,620	0	0
Carter	*Wilson	12- 7-6	1	....	1	100
Total Carter			10	5,275	9	4,810

(*Continued on Page 43*)

Seminole District Production by Companies and Leases, May 23 and May 16, 1928

(*Continued from Page 42*)

Company	Farm	S. T. R.	May 23 Wells	May 23 Prod.	May 16 Wells	May 16 Prod.
Continental	Cosar	36– 8–6	4	1,870	4	1,740
Gypsy	*Brown	33– 8–6	1	50	1	50
Gypsy	*Conard	22– 7–6	1	150	1	100
Gypsy	Campbell	36– 8–6	2	152	2	220
Gypsy	*Denmark	11– 7–6	1	150	1	100
Gypsy	Nungee	1– 7–6	1	32	1	32
Gypsy	*Hulhoke	14– 7–6	1	150	1	100
Gypsy	Pottie	35– 8–6	4	1,812	4	1,947
Gypsy	Renton	11– 7–6	3	3,267	3	3,212
Total Gypsy			14	5,763	14	5,661
Independent	*Harris	23– 7–6	2	202	2	200
Independent	Davis	2– 7–6	3	2,550	3	2,700
Total Independent			5	2,752	5	2,900
I. T. I. O.	Campbell	1– 7–6	1	72	1	82
I. T. I. O.	Dungan	35– 8–6	3	2,001	3	2,060
I. T. I. O.	MA House	1– 7–6	1	280	1	235
I. T. I. O.	WE House	1– 7–6	1	86	1	69
I. T. I. O.	WE House-B	2– 7–6	4	2,054	4	2,195
I. T. I. O.	Hull	26– 8–6	1	65	1	75
I. T. I. O.	Jackson	1– 7–6	3	1,681	3	1,623
I. T. I. O.	McCulla	1– 7–6	3	780	3	733
I. T. I. O.	Nitey	2– 7–6	6	953	6	1,016
I. T. I. O.	Phoebe-A	36– 8–6	3	673	3	699
I. T. I. O.	Phoebe-B	36– 8–6	4	344	4	269
I. T. I. O.	Reed	1– 7–6	1	62	1	67
I. T. I. O.	Soketneche	1– 7–6	4	835	4	841
Total I. T. I. O.			39	9,886	39	9,964
Magnolia	Cruse	2– 7–6	4	1,887	4	2,162
Magnolia	Dixon	31– 8–7	1	21	1	18
Magnolia	Pottie	35– 8–6	3	660	3	528
Total Magnolia			8	2,815	8	2,708
Mid-Continent	Bruner	*11– 7–6	1	100	1	100
Mid-Continent	Smith	* 5– 7–7	1	25	1	25
Mid-Continent	Wadsworth	36– 8–6	7	820	7	875
Total Mid-Continent			9	945	9	1,000
W. B. Pine	Hoyecha	26– 8–6	1	340	1	695
Pine et al	Pottie	36– 8–6	2	770	2	100
Total Pine			3	1,110	3	795
Pure	Harjo	11– 7–6	1	3,095	1	3,189
Prairie	Chilcoat	25– 8–6	1	840	1	870
Prairie	Dungan	35– 8–6	1	70	1	80
Prairie	House	2– 7–6	4	1,340	4	1,445
Total Prairie			6	5,345	6	2,385
Reiter-Foster	Bunyard	*14– 7–6	1	100	1	100
Roxana	Cosar	11– 7–6	1	326	0	0
Shaffer	Narcome	36– 8–6	1	95	1	70
Sinclair	Cosar	36– 8–6	3	2,635	3	2,155
Sinclair	Teewee	*14– 7–6	1	100	1	100
Total Sinclair			4	2,735	4	2,255
Snowden-McS.	Tiger	*13– 7–6	1	0	1	100
Superior	Soketneche	1– 7–6	1	13	1	13
Texas	Coker	1– 7–6	4	1,870	4	1,845
Texas	Hotulke	*23– 7–6	1	125	1	100
Total Texas			5	1,995	5	1,945
Tidal	House	1– 7–6	3	795	3	735
Tidal	Johnson	1– 7–6	1	65	1	65
Total Tidal			4	860	4	800
TOTAL LITTLE RIVER			127	47,646	123	45,348

SUMMARY

TOTAL LITTLE RIVER	**127**	**47,646**	**123**	**45,348**
TOTAL BOWLEGS	**313**	**63,349**	**312**	**66,360**
TOTAL EARLSBORO	**281**	**92,817**	**285**	**95,826**
TOTAL SEMINOLE	**303**	**52,353**	**302**	**52,783**
TOTAL SEARIGHT	**69**	**13,900**	**69**	**14,505**
GRAND TOTAL	**1,093**	**270,065**	**1,091**	**274,822**
Average per well			**247**	**252**

*Wells restricted in production.

Completions in Oklahoma and Kansas, Week Ended May 26, 1928

OKLAHOMA

Caddo County

Company	Well No.	Location	Depth		Init. Prod.
Garvin Drlg.	1	SWc NW NW 4-5-9 W	T.D. 4087		Dry
Shelton et al.	1	NWc SE 12-5-9 W	T.D. 2212		Dry

Carter County

Magnolia	3	SWc NW 29-1-3 W	T.D. 3990		Dry
Magnolia	2	NEc SW NW 23-1-3 W	2330-2383		275
Humble	4	SWc SE NW 29-1-3 W	2650-3263		65
Boring et al	1	NWc SW SE NW 10-4-2 W	2175-2197	OWD	235
Boring et al	2	NWc SW SE NW 10-4-2 W	2122-2176		365

Creek County

Sidwell Drlg.	1	NWc NE 12-18-8 E	2302-2326		8
Transcontinental	2	SEc NE SW 21-17-8 E	3518-3540		80
Tibbens	3	SWc SE SW 20-15-9 E	2644-2715		8
Billingslea	1	NEc SE NE 21-15-9 E	T.D. 3672		Dry
Wood	1	NWc SE 25-14-19 E	T.D. 3543	OWD	Dry

Garvin County

Magnolia	1	NWc SW NW 12-3-1 E	T.D. 5562		Dry

Grady County

Remington	1	SWc NE 13-9-5 W	T.D. 720		Dry
Meridian	1	NEc NW SW 25-5-8 W	2026-2420		23M
Carter	6	NWc NE NW NW 26-5-8 W	2023-T.D.		40M
Commerce Dev.	2	NWc SW SW 13-4-8 W	2222-2360		35M

Hughes County

I. T. I. O.	2	SWc NE SW 8-5-8 E	2397-2443		146

Jefferson County

Heydrick et al.	2	NWc NE SW 24-6-6 W	T.D. 2507		Dry
Sigler et al.	1	NWc SW SW 16-7-5 W	T.D. 1950		Dry
Sigler-McCall	1	SEc NE SE SW 17-7-5 W	772-804		36
Sigler-McCall	2	CSL N½ S½ S½ 17-7-5 W	628-633		6M

Kay County

Boucher et al.	1	SEc 23-27-2 W	T.D. 3815		Dry
Martin et al.	2	SEc NE SW 4-27-1 E	T.D. 751		Dry
Marland	4	SWc NW NW SE 9-25-2 W	T.D. 4438		Dry
Marland et al.	2	SEc NE NE SW 9-25-2 W	T.D. 3779		Dry
Marland	4	SWc NW NW SE 9-25-2 W	T.D. 4523	OWD	Dry

Logan County

Prairie	1	SEc NE NE 33-18-4 W	T.D. 6218		Dry

Lincoln County

Magnolia	1	SEc 10-15-5 E	T.D. 4366		Dry
Magnolia	2	NEc SE SW 8-14-4 E	5056-5076		105

Muskogee County

Boyle et al	7	NWc NE SE 8-15-15 E	1507-1618		150
Denton-Marshall	3	NEc SE 32-15-15 E	2020-2060		35
Williams	1	SWc SE SW 8-15-17 E	1276-1296		10
Herbert	2	CWL E½ SE NW 14-13-18 E	717-730		2M
Kimsey	1	SEc NE 1-14-18 E	T.D. 600		Dry
Douglas Drlg.	3	SWc NW SW NW 7-14-19 E	T.D. 1011		Dry

Okmulgee County

Pure	3	NEc SW SW 24-15-14 E	T.D. 2387		Dry
Marion	1	CSL NW SE 16-13-15 E	T.D. 1364		Dry
Florine Drlg.	1	NEc 11-11-12 E	T.D. 2011		Dry
Transcontinental	1	CNL NW SE 34-16-14 E	1858-1891		40
Roberts	1	NEc SW NE 22-15-11 E	2100-2140		20
Kirkland & Son	8	SEc SW SW NE 17-15-13 E	1363-1424		10
Summers	3	CSL NW NE 10-15-14 E	945-1563		10&1M

Osage County

Kewanee	1	NWc SW 21-27-6 E	2887-2945		40
Kewanee	8	SWc SE SW 21-27-6 E	2918-2968		50
Phillips	2	SEc SW SE 21-27-6 E	2931-2975		150
Marland	10	NWc NE SE NE 16-24-8 E	1532-1536		5
Luke et al	1	SEc NW 32-24-8 E	2460-2477	OWD	15

Pawnee County

Kanola	7	CNL NE SE 11-20-8 E	2433-2474	OWD	10

Pontotoc County

Ramsey	1	N Wc NE 32-5-5 E	2265-2670		450

Pottawatomie County

Continental	5	NEc NW 19-7-4 E	3865-3948		827
Gypsy	3	NEc SW NE 19-7-4 E	3690-3819		1015
Independent	1	SWc NE NE 19-7-4 E	3761-3910		290

Pittsburgh County

Quinton Spelter	1	SEc 9-7-18 E	1738-1955		55M

Seminole County

Gypsy	4	NEc 35-8-6 E	4112-4123		1945
Texas	4	SWc NW SW 1-7-6 E	4270-4278		1515
Magnolia	3	SEc 2-7-6 E	4148-4193		800
Carter	2	SEc NW NE 11-7-6 E	4256-4281		1835
Carter	1	SWc 12-7-6 E	4206-4211		3925
Mid-Continent	10	SEc SW SE 7-5-8 E	2670-2772		900

Stephens County

Snodgrass	6	SEc NE NE NW 34-1-8 W	1668-1693		50
Pace et al	2	SEc NE SE NE 12-2-8 W	1561-1565		250
Skelly	7	SEc SW SE 13-1-4 W	2349-3185		12&5M
Pearce-Brown	1	NWc SE 5-2-6 W	T.D. 2520		Dry
Magnolia	1	NWc NE 28-1-5 W	T.D. 4430		Dry
Pace	1	NWc SE 14-2-8 W	T.D. 2069		Dry

Tulsa County

Holmes et al	1	NEc 31-19-11 E	T.D. 2480		Dry
Crider et al	2	CEL SE SW 15-16-12 E	2001-2010		35

Wagoner County

Deems	10	CEL NW SW 31-18-15 E	T.D. 1972		Dry
Green et al	1	CNE NE 15-18-17 E	T.D. 885		Dry
Gillespie et al	1	CWL NE NW 21-17-15 E	T.D. 1944		Dry
Summers et al	1	SWc SE 12-16-15 E	T.D. 1063		Dry

KANSAS

Butler County

Dixie	1	NWc 10-27-6 E	3125-3146		100

Cowley County

Hull et al	17	NEc 24-32-4 E	2967-3040		100
Watchorn	4	C SE SE 32-33-6 E	444-450		1¼M
Watchorn	2	SEc SW SW 33-33-6 E	T.D. 570		Dry

Elk County

Landon et al	1	SWc SE NW 30-30-11 E	T.D. 1602		Dry

Greenwood County

Theta	8	SEc NE SW SE 23-22-12 E	1688-1701		15
Braden-McClure	2	SEc NE NE 22-22-13 E	1728-1661		15
Tidal	4	NEc NW SE 30-22-13 E	1667-1715		175
Simmons-Rhodes	3	NWc NE SE 30-22-13 E	1649-1686		300

Marion County

Lariaux et al	2	NWc SE NW 23-17-4 E	2350-2393		30

Sumner County

Forrester Drlg.	1	NEc SE SE SE 26-30-4 W	1932-1945		2½M
Roxana	6	SEc SW SE 24-31-2 E	1847-1907		530
Roxana	6	NEc NW NE 25-31-2 E	1892-1902		16
Roxana	12	Tract-5, 14-32-2 E	1995-2077		40
Roxana	1	SEc NW SW 14-32-2 E	2018-2113		75
Palmer-Barnsdall	6	NWc 23-32-2 E	2100-2151		90

Completions in N. E. Central, West, Panhandle and North Texas, Week Ended May 26, 1928

TEXAS
NORTH AND EAST CENTRAL

Anderson County

Company	Well Farm	Location Survey	Depth	Initial Prod.
Humble	1-Mandelstam	Roberts	T.D. 3934	Dry

Brown County

Cranfill-Reynolds	2-Keller	Mitchell	1200-1210	15
Caldwell	2-Caldwell	Kerr County	630-725	.4M
Midland	3-Butler	Benson	1260-1280	115
Humble	19-Kilgore	Delgado	T.D. 1200	Dry
Conway Bros.	1-Newton	Miller	T.D. 1351	Dry
Baker et al.	1-Eubanks	Mitchell	T.D. 1220	Dry
Amerada	1-Plummer	H&TB	T.D. 1314	Dry
Blanchard et al.	1-Eubanks	Mitchell	T.D. 1615	Dry
Midsun	1-Cross	Kenney	T.D. 1155	Dry
Denniger	1-Culberson	ET	T.D. 1562	Dry
Wagley	1-Cox	Whitley	T.D. 1560	Dry

Callahan County

Bridwell-Heydrick	1-Stewart	Boal	T.D. 310	Dry
Swoveland et al.	2-Shackelford	D&DA	T.D. 781	Dry
Farlyn	1-Snyder	BBB&C	T.D. 1100	Dry
Watchorn	1-Finley	Boal	T.D. 1010	Dry
Garner-Valley	1-Walker	D&DA	T.D. 405	Dry
Montimer et al.	1-Hickman	I&GN	T.D. 715	Dry
Montimer et al.	1-Hickman	I&GN	T.D. 710	Dry
Richard	1-Harris	D&DA	T.D. 854	Dry

Coleman County

Selby	1-Neill	Wright	T.D. 2749	Dry
Moutary	1-Padgett	Brazos	T.D. 3575	Dry
Continental	1-Overall	GH&H	1613-1618	65
Continental	1-Overall	Overall	1492-1508	530&5M

Eastland County

Applegate et al.	3-Cunningham	Epperson	T.D. 3500	Dry
Mays et al.	1-Woods	McLennan	T.D. 1625	Dry

Haskell County

Nealdton	1-Newcomb	H&TC	T.D. 1855	Dry

Jack County

Marland et al.	1-Cherry Homes	Irving	T.D. 2519	Dry

Jones County

Swensondale	1-Canton	D&DA	T.D. 3398	Dry

Runnells County

Gibson-Johnson	1-Serrah	ET	T.D. 3230	Dry
Swensondale	1-Werner	Wilson	T.D. 3445	Dry

Shackleford County

Tannehill et al.	3-Mathews	ET	T.D. 1215	Dry

NORTH TEXAS

Archer County

Bridwell	4-Wilson	Geraldine	1588-1589	25
Petroleum Prod.	6-Wilson	Geraldine	1574-1582	50
Moran	1-Parkey	H&TC	T.D. 1804	Dry
Petroleum Prod.	1-Wilson	SP	T.D. 1610	Dry
Consolidated et al.	1-Netherton	ATNCL	T.D. 1600	Dry
Burns et al.	1-Wilson	ATNCL	T.D. 1556	Dry
Hutchinson	2-Hutchinson	ATNCL	T.D. 1202	Dry
Texas-Grisham	1-Taber	DCSL	T.D. 1552	Dry
Consolidated	1-Campbell	Meade	T.D. 1500	Dry

Wichita County

Bridwell	1-Griffin	Jordan	T.D. 2218	Dry
Hamon	1-Ferguson	KWVFL	T.D. 702	10

Wilbarger County

Lowery	3-Deep et al.	H&TC	847-850	23
Phillips	8-Waggoner	H&TC	T.D. 2308	87
Phillips	1-Waggoner	H&TC	2311-2339	95
Cosden	19-Waggoner	H&TC	2284-2290	143
Cosden	20-Waggoner	H&TC	2287-2298	201
Barkley-Meadows	4-Waggoner	H&TC	2442-2455	204
Fain-McGaha	7-Waggoner	H&TC	2309-2314	210
Fain-McGaha	2-Waggoner	H&TC	2292-2300	450
Waggoner	3-Waggoner	H&TC	2312-2330	606
Texas	3-Waggoner	H&TC	2318-2332	54
Waggoner	5-Waggoner	H&TC	2357-2369	200
Texas	2-Waggoner	H&TC	T.D. 2658	Dry

Young County

Wichita Prod.	3-Hamilton	TE&L	T.D. 1030	Dry
Reed-Wootten	1-Pool	TE&L	T.D. 815	Dry
Stafford et al.	1-Dyer	Hardin	T.D. 700	Dry
Allen-McKee	1-McClure	TE&L	T.D. 602	Dry
Bullington-Lee et al.	3-Boone	BBB&C	471-500	50
Bullington-Lee et al.	4-Boone	BBB&C	468-491	52
Cunningham et al.	9-Hawkins	TE&L	510-534	40
Riggs et al.	8-McKinley	TE&L	567-583	90
Riggs et al.	9-McKinley	TE&L	489-519	40
Shappell	10-Johnson	Sargent	505-531	10
Pennell et al.	8-Boone	BBB&C	510-534	25

PANHANDLE

Carson County

Skelly	8-Schaffer	I&GN	3075-3192	72
Marston	1-Noel	I&GN	3189-3212	264
Empire	1-Noel	I&GN	2470-2667	30M
Gulf Prod.	1-Cobb	I&GN	2500-2651	50M

Gray County

Empire	1-Hughey	I&GN	3200-3650	40
Scott et al.	1-Chapman	H&GN	T.D. 2860	Dry
Shamrock	1-Chapman	H&GN	2660-2820	9&5M

Hutchinson County

Gulf Prod. et al.	41-Dial	ET	2832-2981	98

WEST TEXAS

Crane County

Magnolia	11-Hardwick	Univ.	2843-2894	340
Magnolia	11-O'Keefe	Univ.	2843-2894	600

Crockett County

Dixie	1-Thompson	I&GN	1045-1130	20

Glasscock County

Magnolia	1-Roberts	W&NW	1783-1876	30

Howard County

F. H. E.	1-Roberts	W&NW	2950-3000	135(1 Hr.)
F. H. E.	4-Roberts	W&NW	1828-1856	55
Gulf Prod.	4-Chalk	W&NW	1750-1780	30

Irion County

Hill	1-Horney Ranch	H&TC	T.D. 1725	Dry

Pecos County

McMann	1-Smith	TC	1150-1337	340(1 Hr.)
California	16-Yates	TC	1245-1367	1430 (1 Hr.)
Red Bank	3-Smith	TC	1657-1722	10 (1 Hr.)

Schleicher County

General Securities	1-Whitten	TC	T.D. 400	Dry

Valverde County

Hiawatha	1-Sellers	I&GN	T.D. 3500	Dry
Williams	1-Holman	GH&SA	T.D. 2940	Dry
Blume	1-Moore	Ponsa	T.D. 2675	Dry

Completions in North Louisiana and Arkansas, Week Ended May 24, 1928

Louisiana—DeSoto Parish—Naborton

Company	Well	Location	Depth	Yield
Gulf Refining Co.	Jenkins A-35	35-13-12	2825	dry, aband.

Sabine Parish—Pleasant Hill

Magnolia Pet. Co.	Bettie Hall No. 1	33-10-12	3231	60 bbls.

Natchitoches Parish

Lawson & Pharris	Cowell-Spencer Co. No. 1	22-5-6W	3019	dry, aband.

Ouachita Parish

Montgomery et al.	Johnson No. 1	30-19-4E	2208	4M gas

Richland Parish

Moody & Seagraves	McDonald No. 1	9-15-5E	2865	salt water

Caldwell Parish

Greenwood Prod. Co.	Caldwell L. & T. Co. No. 1	27-13-5E	3502	dry, aband.

Grant Parish—Little Creek

Company	Well	Location	Depth	Yield
L. C. Swope et al.	Fee No. 3	18-9-1E	1607	salt water

Arkansas—Rainbow City—Union County

O. W. Estes et al.	Rowland No. 1	14-17-14	2998	305 bbls.
Lion O & R Co.	Rowland No. 1	15-17-14	2212	2225 bbls.
Magna Prod. Co.	Dumas No. 2	11-17-14	3247	2000 bbls.
Pure Oil Co.	E. F. Gregory No. 3	11-17-14	3187	2250 bbls.

Smackover

Lion O & R Co.	Hays No. 8	4-16-15	2340	100 bbls.
Lion O & R Co.	Murphy G-7	8-16-15	2468	30 bbls.

Union County

R. W. Rhodes et al.	Union Sawmill Co. No. 1	14-19-11	3210	dry, aband.

Drilling Operations in Oklahoma, Kansas and Texas, Week Ended May 26, 1928

	May 26 Loc.	Rigs	Drg.	S.D.	Week Ended Total	May 19 Loc.	Rigs	Drg.	S.D.	Total
OKLAHOMA										
Burbank	3	6	9	1	19	3	6	12	..	21
Other Osage	2	7	19	1	29	3	7	18	2	30
Bristow-Cushing	2	7	27	11	47	6	3	27	10	46
North Oklahoma	9	3	45	38	95	10	2	48	41	101
South Oklahoma	12	10	105	21	148	11	6	109	18	144
Muskogee	..	13	49	21	83	..	9	54	19	82
Okmulgee-Bristow	13	27	65	23	128	15	35	66	18	134
Seminole Dist.	26	26	166	24	242	25	31	163	24	243
Total Oklahoma	67	99	485	140	791	73	99	497	132	801
KANSAS	33	39	159	55	286	28	50	168	58	304
TEXAS										
Central	..	98	247	158	503	..	103	238	159	500
Panhandle	..	66	88	67	221	..	65	89	64	218
N. Central	..	60	114	21	195	..	73	115	21	209
West	..	118	193	151	462	..	106	203	163	472
Laredo	..	1	25	19	45	..	1	25	19	45
Total Texas	..	343	667	416	1,426	..	348	670	426	1,444
New Mexico	..	9	22	21	52	..	8	22	21	51
GRAND TOTAL	100	490	1,333	632	2,555	101	505	1,357	637	2,600

New Field Operations in Oklahoma, Kansas, Panhandle, North, North Central and West Texas, Week Ended May 26, 1928

OKLAHOMA

Beckham County

Company	Well No. Farm	Location
Prod. Exploration..	1-Seidel	NEc NW NW 17-9-22 W

Carter County

Cotton Belt.....	8-Rexroat	NEc NW SW 10-4-2 W
Humble.....	1-Snyder	NWc SW SW 34-1-3 W
Magnolia.....	1-Gabrel	NWc SW 23-1-3 W
Magnolia.....	4-Anderson	SEc NW NW 23-1-3 W
Simpson-Fell.....	1-Winters	NWc SE SE 19-1-3 W

Creek County

Hull.....	1-Walker	SWc 21-18-9
Flynn-Morgan.....	1-Har-Lar-Char	SEc NE NE 17-14-8 E
Shaffer.....	15-Tiger	SEc SW NW 17-17-7 E
Shaffer.....	13-Tiger	NEc SW NW 17-17-7 E
Gibson-Becker.....	1-Tiger	NEc NW SW 17-17-7 E

Garvin County

Magnolia.....	1-Cochran	NEc NW 14-1-3 W

Grady County

Magnolia.....	7-Smith	NWc SW SE 35-5-8 W
Magnolia.....	7-Farwell	SWc NW SE 26-5-8 W
Magnolia.....	6-Farwell	NWc SW SE 26-5-8 W
Carter.....	7-McCaughtry	NWc NE NW 26-5-8 W

Jefferson County

Mitcham et al.....	1-Newcomb	SWc SE SE 8-5-4 W
Simms.....	1-Peniston	SEc NE SW 17-7-5 W

Johnson County

Smity-Kinsley.....	1-Lane	SEc NW 29-1-7 E

Marshall County

Bilbo.....	1-Brown	NWc SE SE 24-5-5 E
Erlewine.....	1-Peters	SWc SE 13-5-5 E

Muskogee County

Towner-Witt.....	2-Wade	C S½ SW NW 6-14-19 E
Neeley et al.....	1-Tiger	NWc NE NE 1-14-18 E
Kimsey.....	2-Sanders	CEL NE SE NE 1-14-18 E
Williams.....	1-Rector	NEc S½ SE NW 20-15-17 E
Boyle et al.....	2-Larney	NWc SW 9-15-15 E
Mitchell.....	3-Barnett	NWc SW 35-16-15 E

Okmulgee County

Ralco.....	8-Been	CEL NW NE 33-12-12
Sheridan.....	2-Chase	NEc SW SW 8-15-12
Wallace.....	4-Colbert	SEc SW NE 14-14-14
Mechlin-Berlin....	7-Colbert	CWL SE NE 14-14-14
Jolly.....	1-Stem	CEL W½ NW NE 32-15-14
Devonian et al.....	8-Wisner	C SW SE 7-15-13 E

Osage County

Osage Syndicate...	12-	SWc 7-21-9

Pawnee County

Bird-Hanley et al..	1-Gifford	NEc SE NE 12-20-8 E

Payne County

Prod. & Ref. Corp.	1-Goss	NWc SE SW 7-18-5 E
Mulberry.....	2-Miller	SEc NE SW 27-19-4 E

Pittsburgh County

Sans Bois.....	1-McGaha	SWc NE 20-7-17 E

Pontotoc County

American.....	1-Lungsford	SWc NE SE 22-5-6 E
Westheimer-Daube.	4-Millner	SWc SE SE 8-5-8 E

Pottawatomie County

Westheimer-Daube.	3-Freid	SWc NW 24-7-4 E
Phillips.....	1-Lydick	SEc NE 24-7-4 E
Twin State.....	6-Spangy	NEc NW SE 19-7-4 E
Gypsy.....	5-Cecil	SEc SW NE 19-7-4 E

Seminole County

Sunray.....	1-Nichey	SWc NW NW SE 18-5-8 E
Cal-Cul-Oil.....	1-Cynda	SWc NW SW 25-5-7 E
Carter.....	1-Spillman	SEc SW SW 7-6-8 E OWD
Smith.....	1-Barkus	NEc SW 15-7-7 E
Skelly-Atlantic....	2-Sherry	NWc SW 6-9-6 E
Skelly.....	1-Shepherd	SWc NW 6-9-6 E
Barnsdall.....	1-Jackson	NEc 5-9-6 E
Larkin.....	2-Cluck	NWc 4-9-6 E
Gypsy.....	7-Sango	SEc NE SE 1-9-5 E

Stephens County

Murphy.....	13-Fobb	SEc NE NW SW 12-2-8 W
Ft. Ring et al.....	4-Taliaferro	NEc SE SE 28-1-8 W

Tulsa County

Ellen.....	5-Island	SWc NW NE NE 25-18-14

KANSAS

Butler County

Producers Pet.....	1-Holcomb	NWc SW NW 8-29-4 E

Cowley County

Vernon-Roxana....	1-Gilmer	SEc NW NE 6-30-4 E
Shawver et al.....	1-Tucker	SEc NW 12-30-4 E
Hull et al.....	1-Lehrman	SEc SW SW 13-32-4 E
Roth-Faurot.....	1-Werner	NEc SW 31-32-6 E
Watchorn.....	4-Esch	C N E SE 32-33-6 E

Dickinson County

Kanson-La Rob....	1-Weber	NEc SE 23-15-4 E

Ellis County

Streeter-Stearns....	1-Slimer	NWc SE 2-11-17 W
Haworth-Howard..	1-Shutts	C NE 5-12-17 W

Greenwood County

Ritchey-Moore....	1-Pixlee	SEc SW NW 3-22-10 E
Manhattan.....	7-Sheppard	NEc NW NW 11-22-10 E
Empire.....	13-Schwab	SEc NW NE 25-22-12 E
Darby.....	12-Schwab	NWc SE NW 30-22-13 E
Skelly.....	4-Schwab	SWc SE NE 30-22-13 E

Marion County

Johnson et al.....	2-McNicols	NWc SE NE 21-17-4 E

Morris County

A. A. Oil Co.....	1-Adams	NWc NE SE 29-14-5 E
Cranston et al.....	1-Fostburg	NWc NE NE 19-17-5 E

Sumner County

Roxana.....	2-Scroggins	SEc NE NW 14-32-2 E
Palmer-Barnsdall..	11-Weinrich	SWc NW NW 23-32-2 E

TEXAS

NORTH AND NORTH CENTRAL

Archer County

Company	Well No. Farm	Location	Survey
Simms.....	1-Conner	Abstract-452	Tomlinson
Texas et al.....	1-Taber	Abstract-113	Dallas Co. Sch. Ld.
Panhandle et al....	5-Farmer	Blk-1	Anderson
Golhke et al.....	6-Wilson	Blk-249	Geraldine
Texas.....	1-Jackson	Blk-116, Abstract-2	Allridge
Bridwell.....	4-Wilson	Blk-12	Geraldine
Winemiller et al...	1-Griffin	Sec-2, Blk-4	H&TC

Brown County

Curry.....	1-Logan	Sec-19, Blk-278	Kerr Co. Sch. Ld.
Henshaw.....	3-Cross	Blk-624	Kenney
Henshaw.....	14-Bush	Blk-624	Kenney
Jay Hawk.....	10-Boyson	Blk-4	Williams
Jay Hawk.....	1-Cannon	Blk-3	Arenbeck
Smith.....	1-Marr	.....	Gillispie
Brown-Cowden....	1-Lewis	Blk-624	Kenney
Sinclair.....	1-Eubanks	Blk-141	Mitchell
Cranfill-Reynolds..	4-Eubanks	Blk-141	Mitchell
Cranfill-Reynolds..	5-Eubanks	Blk-141	Mitchell
Henshaw.....	1-Penticost	Blk-282	Jones
Kone Prod.....	2-Hickman	Blk-783	Benson
Gilman et al.....	5-Hickman	Blk-783	Benson
Phillips.....	13-Hickman	Blk-783	Benson
Phillips.....	14-Hickman	Blk-789	Delgado
Humble.....	19-Kilgore	Sec-2, Blk-789	Delgado
Bailey-Love et al...	2-Lawson	.....	King

Callahan County

Sterling.....	2-Beasley	Sec-25	D&DA
Ames.....	1-Boydston	Sec-4	Powell
Gibson-Johnson....	3-Snider	Sec-139	BBB&C

Coleman County

Kirk et al.....	1-Cumsey	Blk-38	Clayton
Continental et al...	6-Overall	Blk-701	Barkley
Continental et al...	2-Hutchins	Sec-11, Blk-1	GH&H
Tower-McKanna...	1-Moody	Sec-10, Blk-665	Scott
Cunningham et al..	2-Jennings	Blk-94	Lipscomb

Eastland County

Root et al.....	3-Thorpe	Sec-37, Blk-4	H&TC
Jordon et al.....	1-Shamburger	Sec-17, Blk-4	H&TC
Operators O & G...	2-Williamson	.....	Van Norman

Haskell County

Edminston et al...	2-Reynolds Cattle Co.	Sec-4, Abstract-15	Brock

Jack County

Petroleum Prod....	1-Jones	Abstract-256	Hughson
Hays et al.....	1-Kinder	Sec-2668	TE&L

Jones County

Evans et al.....	1-King	Sec-197, Abst-14	Burns

McCulloch County

McLean et al.....	1-West	Blk-155	H&TC

Montague County

McCall et al.....	1-Jackson	....	Pettitt

Navarro County

Byrd et al.....	1-Shelton	....	Shelton
Moss-Kelling et al..	1-Moody	....	Stevenson

Parker County

Lynch et al.....	1-McCracken	Sec-2549	TE&L

Shackleford County

Callahan et al.....	3-Nail	Sec-151	ET
Tannehill et al.....	3-Mathews	Sec-34	ET
Boehm et al.....	1-Davis	Sec-17, Blk-14	T&P

Stephens County

Corzelius Bros. et al.	1-Chesley	Sec-48, Abst-133	Pier

Wichita County

Magnolia.....	1-Kemp	Blk-27	KWVFL

Wilbarger County

Phillips.....	1-Waggoner	Sec-18, Blk-4	H&TC
Cosden.....	12-Waggoner	Sec-31, Blk-4	H&TC
Waggoner.....	1-Waggoner	Sec-24, Blk-4	H&TC

Young County

Pitzer-West et al...	1-Gisham	Abstract-137	Hill
Shaw et al.....	1-Trues	Sec-98, Abst-2150	Burch
Payne-Yaden.....	1-Slater	Sec-843, Abst-801	TE&L
Carpenter.....	1-Tiffin	Sec-1955, Abst-1029	TE&L
Byon.....	2-Edwards	Sec-1499	TE&L
Reed-Wootten.....	1-Spear	Abstract-250	Stoneham
Kimbell-Lyles.....	1-Dyer	Abstract-1707	Stroud
Parker et al.....	4-Johnson	Blk-4	Sargent
Shappell.....	2-Cox	Abstract-252	Sallie
Kleiner-Hill-West..	10-Langston	Sec-1490	TE&L
Bullington-Lee et al.	3-Boone	Abstract-34	BBB&C
Cunningham et al..	9-Hawkins	Sec-1914	TE&L
Riggs et al.....	9-McKinley	Sec-1489	TE&L
Riggs et al.....	8-McKinley	Sec-1489	TE&L
Bullington-Lee et al.	4-Boone	.....	BBB&C
Goldsmith.....	2-Miller	Sec-3404, Abstract-1224	TE&L
Parks.....	1-Hawkins	Abstract-120	GB&N

WEST TEXAS AND PANHANDLE

Borden County

Doheny Jr. et al...	1-Koonsman	NWc Sec-2, Blk-2	T&NO

Carson County

Empire.....	1-Dauer	C NE Sec-73, Blk-4	I&GN

Crockett County

McMann-Amerada.	1-Powell	NW NE SW Sec-52, Blk-BB	EL
Pecos.....	1-University	CEL W½ Sec-13, Blk-31	Univ.

Gray County

Baldridge et al.....	1-Chapman	SEc N½ Sec-9	Lynch
Barker-Wetzel.....	1-Morse	SW NW SW Sec-66, Blk-25	H&GN
Baldridge et al.....	1-Chapman	NEc SW Sec-10, Blk-26	H&GN
Alco Royalty.....	1-Finley	SWc	Chaney
Vitek.....	1-Skidmore	SEc SW Sec-164, Blk-3	I&GN

(*Continued on Page 46*)

New Field Operations in Oklahoma, Kansas, Panhandle, North, North Central and West Texas, Week Ended May 26, 1928

(*Continued from Page 45*)

Howard County

Company	Well No. Farm	Location	Survey
Cosden	1-Roberts	SEc SW Sec-129, Blk-29	W&NW
Goodley	5-Hooks	NEc SE NW Sec-140, Blk-29	W&NW

Irion County

Moore-Kennedy	1-Tankersly	NW NE SW Sec-23	GC&SF

Pecos County

Mazda-Savoy	2-Smith	Sec-24, Blk-194	TC
McMann	2-Smith	Sec-104	TC
Bateman-Price	1-Pecos R. Bed	Sec-29, Blk-12	H&GN

Reagan County

Big Lake	144-Univ.	Sec-1, Blk-2	Univ.
Big Lake	154-Univ.	Sec-12, Blk-2	Univ.
Big Lake	146-Univ.	Sec-12, Blk-2	Univ.
Big Lake	147-Univ.	Sec-12, Blk-2	Univ.
Big Lake	148-Univ.	Sec-1, Blk-2	Univ.
Big Lake	149-Univ.	Sec-1, Blk-2	Univ.

Winkler County

Pure	7-Hendricks	SE SW SW Sec-41, Blk-B-5	PSL
Landreath Prod.	8-Hendricks	C SW Sec-29, Blk-B-5	PSL
Roxana	4-Hendricks	CEL NW Sec-45, Blk-26	PSL
Pure	5-Hendricks	CNL SE Sec-45, Blk-26	PSL
Landreath Prod.	3-Hendricks	SW SE SE Sec-40, Blk-26	PSL
Landreath Prod.	3-Hendricks	CWL SW Sec-40, Blk-26	PSL
Gulf Prod.	23-Hendricks	CWL NE Sec-45, Blk-26	PSL
Gulf Prod.	22-Hendricks	NE NW NE Sec-45, Blk-26	PSL
Gulf Prod.	12-Hendricks	NW NE NE Sec-45, Blk-26	PSL
Gulf Prod.	20-Hendricks	CSL NE Sec-45, Blk-26	PSL
Southern Crude	5-Hendricks	CEL SE Sec-41, Blk-26	PSL
Southern Crude	4-Hendricks	NEc SE Sec-41, Blk-26	PSL
Humble	7-Hendricks	NEc SE Sec-32, Blk-26	PSL

New Plan Would Restrict Little River

(*Continued from Page* 40)

drilled. These wells will be drilled on the "dry hole money" guarantee plan, the same as were the 10 in south Little River. Those of the eight that are producers will be pinched in to 50 barrels daily until the areas are opened by completion of other wells, none of which will be started within a period of 75 days from June 1. The eight wells will be located as follows:

Wilcox Oil & Gas Co., SE SE of 24-9-5. (Tentative location which will not be drilled if the Wilcox can obtain renewal of the lease.)

Gypsy Oil Co., SE NE of 1-8-5.

Prairie Oil & Gas Co., NW NE NW of 12-8-5.

Indian Territory Illuminating Oil Co., SW W½ SW of 22-8-5.

Gypsy Oil Co., SW NE of 6-8-6.

Gypsy Oil Co., SE SW of 6-8-6.

Gypsy Oil Co., SW SW of 5-8-6.

Carter Oil Co., NW NW of 8-8-6.

Within these areas, all of which have been opened by producing wells, five other tests are under way. These were authorized at a previous meeting and were started about May 1. They also are on the dry hole contract basis.

Except for the south Little River area, field developments in the Mid-Continent were negligible during the week. That period saw the wind-up of the 10 test wells, three being completed. The banner well of the 10 was the Roxana Petroleum Corp.'s No. 1 Hotulka, NE NE NW of 23-7-6, which found the Wilcox at 4312 feet and at two feet in started its huge flow, making 347 barrels the first hour and 4393 barrels the first 16 hours.

For the 24-hour period ended at 7 a. m. May 25, the well made 6560 barrels and it was reported to have made more than 8000 barrels in one 24-hour period. It is a half mile from other production, but with wells previously completed as producers in four directions, was regarded as being certain to produce.

More important from the standpoint of proving new territory was the completion of the No. 1 Williams of T. B. Slick, Inc., in the NE SE NE of 15-7-6. It topped the Wilcox at 4328 feet and was drilled in five feet. It made 1710 barrels in 19 hours, May 24 and for the following 24 hours it produced 3420 barrels.

As reported in last week's issue, Carter Oil Co.'s No. 1 Larney, NW NW NW of 24-7-6, established production more than a half mile from previously completed wells. Its sand record was 4337-46 feet and it produced in excess of 3000 barrels at its high mark.

All the test wells in this area either had been or were in process of being shut in as the week closed to 100 barrels daily each. Together, they prove about 1800 to 2000 acres of territory and, if the regulated campaign of drilling is adopted of one well to 20 acres, there should be between 80 and 100 wells started in the near future. Considerable material is now being concentrated at points near the field so that the transportation system will not be jammed up when the time for moving to locations begins and the traffic can be handled in more orderly fashion. The proposed Aug. 15 completion date would give everybody ample time to drill the locations and the whole campaign could be conducted in a manner that would be leisurely as compared to the early development of the Seminole district.

An important wildcat southeast of the area covered by the Little River agreement looked like a failure at the close of the week. E. W. Whitney, in the NE NW NE of 25-7-6, topped the Viola lime at 4360 feet and at 4363 feet had 3600 feet of sulfur water in the hole. While it was to be completed to the Wilcox, there was little hope that it would produce. It is a little more than a mile southeast of the Carter's No. 1 Larney, in the NW of Sec. 24.

EARL A. TRAGER

Trager Becomes Skelly Chief Geologist

HOUSTON, May 28. — Earl A. Trager has been appointed chief geologist of the Skelly Oil Co., Tulsa, effective June 1. He resigned from the engineering firm of Earl Oliver & Co., Ponca City, to accept the new post.

Besides research work in the Mid-Continent and west Texas, Mr. Trager's professional record includes active service as chief of sub-surface geology in the general Panuco district for the Marland Oil Co. of Mexico, S. A., for several years.

Mr. Trager's original work in the Mid-Continent included service for the Empire Gas & Fuel Co., Bartlesville, 1917-1920, and special sand correlation investigations for the Oklahoma Central Oil Co., Tulsa, in the summer of 1921. He received his B. S. degree from the University of Chicago in 1917. He is a member of the American Association of Petroleum Geologists, American Association for the Advancement of Science, American Institute of Mining and Metallurgical Engineers, Tulsa Geological Society and other organizations.

Gulf Wins Decision Over Texas Co. In Aluminum Chloride Fight

CLEVELAND, May 28

FIFTEEN years of litigation between the Gulf Refining Co. and The Texas Co. over patents covering cracking of oil by the use of aluminum chloride as a catalyst, may be ended permanently by a decision in favor of the Gulf, handed down May 23 by the United States Circuit Court of Appeals for the fifth circuit, sitting at New Orleans.

The decision of this court is final unless The Texas Co. carries the case to the Supreme Court of the United States.

The decision was on an appeal by The Texas Co. from a decision of the United States district court at Houston, in which suit was brought by The Texas Co. charging the Gulf specifically with infringing Patent No. 1,424,574, which was granted to the Gulf Refining Co. as assignee of Almer M. McAfee, Aug. 1, 1922. The district court found in favor of the Gulf.

The beginning of the fight was in 1913. Almer M. McAfee, a chemist, was transferred in that year from The Texas Co.'s terminal at Bayonne, N. J., where he was employed, to the refinery at Port Arthur, Texas, and put to work under the direction of Dr. George W. Gray, then chief chemist of the company.

In December, 1912, McAfee informed Gray of the results of experiments McAfee had made which involved the use of aluminum chloride.

"In January, 1913," according to the court decision, "Gray, at the expense of The Texas Co., applied for a patent for a process for making gasoline by the use of aluminum chloride. After McAfee learned of that application he protested to Gray as to his, (McAfee's) name not being included in the application.

"SUBSEQUENTLY McAfee complained to Mr. Holmes, vice president of The Texas Co. and manager of its refining department, as to Gray being recognized as the inventor of the process for making gasoline by the use of aluminum chloride, with the result that McAfee obtained no recognition by his employer of his claim in that regard, or of his claim to another invention which was adjudged to be his in a suit in which The Texas Co. was his adversary.

"Soon thereafter McAfee resigned his position with The Texas Co., became an employee of the Gulf, assigned to the Gulf his rights to the invention protected by the patent. The Gulf paid the expenses of that application and of the contest which followed the making of it.

"In August, 1916, patents were issued to Gray in pursuance of his applications filed in January, 1913. In October, 1917, the patent office declared an interference between McAfee's application and the patents issued to Gray. The interference proceeding resulted in a contest which was waged for more than four years, the real contestants being The Texas Co. on one side and the Gulf on the other.

"Results of that contest were the examiner of interferences decided that Gray was the inventor of the process; on appeal from that decision the examiners in chief decided that McAfee was the inventor; on appeal from that decision the commissioner of patents decided in favor of McAfee's claim; on appellant's appeal from that decision to the Court of Appeals of the District of Columbia, that court, on March 22, 1922, decided that McAfee was the inventor of the process, and in pursuance of that decision the patent, on Aug. 1, 1922, was issued to the Gulf as assignee of McAfee.

"THROUGHOUT that contest The Texas Co. urged the contention that Gray was the inventor of the process and that McAfee was not.

"At no time throughout the period of that contest did The Texas Co. make the claim that if McAfee was the discoverer or the inventor of the process in question The Texas Co. was the equitable owner of the invention because of McAfee's relation to it as an employer at the time the invention or discovery was made.

"That claim was never made by The Texas Co. until it filed a suit in a Texas state court in October, 1924.

"Instead of The Texas Co. at any time prior to October, 1924, making any claim that, if the invention was McAfee's, it was entitled to that invention because of McAfee's relation to it at the time the invention was made, The Texas Co.'s president in a letter addressed to the Gulf's president on June 29, 1920 stated:

> In making this suggestion I am not unmindful of the fact that even if both of the pending cases are decided adversely to The Texas Co., it will, nevertheless, retain a shop-right or non-exclusive license under the McAfee patents, inasmuch as McAfee's work was done while he was in The Texas Co.'s employ.

"As to the kind of work in which McAfee was engaged at the time of his discovery of the patented process the evidence was conflicting. One phase of the evidence was to the effect that the task assigned to McAfee after he came to Port Arthur was that of making investigations and experiments with the object of solving the problem of increasing the yield of gasoline from petroleum.

"Another phase of the evidence was to the effect that the task assigned by Gray to McAfee was that of conducting experiments in 'cracking and hydrogenating'—the cracking of hydrocarbons by means of heat and pressure and the hydrogenating of fatty oils by means of nickel or other catalyst.

"The claim asserted by The Texas Co. was that in equity it was the owner of the invention or discovery in question because of the inventor's relation to it as its employee at the time the patented process was discovered. If in making that invention or discovery McAfee did what he was employed and paid for by The Texas Co. to do, The Texas Co. was the beneficial owner of the invention or discovery. Standard Parts Co. v. Peck, 264 U. S. 52.

"A party who in litigation, with knowledge of the facts, has asserted a particular claim, title or right, cannot afterward assume a position inconsistent with such claim, to the prejudice of the same adversary who has acted in reliance on such claims being as it was previously made—in other words a party who, for the purpose of maintaining his position in litigation, has deliberately represented a thing in one respect, is estopped to contradict his own representation by giving the same thing another aspect in litigation with the same adversary as to the same subject matter. Ohio & Miss. Ry. Co. v. McCarthy, 96 U. S. 258; Jefferson Standard Life Ins. Co. v. Wilson, 260 Fed. 593; 21 C. J. 1202.

"THE circumstances of The Texas Co.'s delay in disclosing the existence of the right now asserted were such that that delay had the effect of a concealment calculated to influence the Gulf to change its position in a way that was to its detriment if the decision it was seeking to bring about could result in no material benefit to the Gulf.

"For reasons above indicated, we are of opinion that The Texas Co.'s delay, in the circumstances disclosed, in making such claim as the one it seeks to enforce in this suit, had the effect of estopping it to assert and enforce that claim against the Gulf.

"The decree is affirmed."

More Ventura Wells Shut In To Conserve Gas

LOS ANGELES, May 26

A NEW conservation movement is under way which calls for the complete shut-in of nine additional wells in Ventura Avenue, in addition to a further pinching-in of a number of other flowing wells, in an effort to reduce still more the surplus gas in the field.

Several companies the previous week had attempted to conserve an additional amount of gas by pinching-in a number of wells, but it was found this method would not gain the desired results. The latest program calls for the shut in of five Associated wells on the Lloyd lease which will hold back 18,000,000 cubic feet of gas and about 1600 barrels of oil. Previous to this movement, the Associated had 9 shut-in wells in the field.

The Shell Co. is shutting-in completely three wells which will hold back approximately 7,000,000 cubic feet of gas and a relatively small amount of oil. Petroleum Securities is also killing one well that is making 4,000,000 cubic feet of gas and some oil.

The complete shut-in of the 9 wells mentioned means a reduction of 29,000,000 cubic feet of daily gas production. The outstanding feature at Ventura Avenue other than the conservation movement this week was the production test of the M. K. & T. Oil Co.'s well which made about 1000 barrels of fluid, with considerable controversy as to what part of this was oil. One report stated that the well was making 160 barrels of about 25 gravity oil in addition to 650 barrels of water. Still another report claimed that most of the fluid was oil. If this well proves to be a commercial producer, it will extend the field about 600 feet to the south.

The well was drilled to 4993 feet and plugged back to 4953 feet, with the 9-inch water string cemented at 4603 feet. There were 501 feet of 7-inch liner in the hole with 2½-inch tubing to 4500 feet. Friday morning the pressure was reported to be 60 pounds on the tubing and 190 pounds on the casing with the flow through to $\frac{7}{16}$-inch bean.

At Long Beach the past week nine new wells were completed in the deep sand, in addition to 3 recompletions, the total initial production being about 14,000 barrels from the 12 new producers. These figures do not take into consideration three new deep zone wells which started flowing into the sumps on Thursday.

Approximately the same number of wells are drilling this week as for the previous week as several wells were spudded. Long Beach now boasts 680 producing wells, 114 of which are producing from the deeper zone.

There is considerable competition at Long Beach to purchase the oil from the new wells. Two major companies are paying premiums. Huntington Beach furnished four new producers the past week in the townsite area, with total initial production of close to 1200 barrels.

At Round Mountain two wells were completed for about 150 barrels each, while three completions were reported from Seal Beach, two in the main field and producing from the Selover zone. One small well was completed in the Alamitos Heights area for only 160 barrels.

The Chanslor-Canfield Midway Oil Co.'s No. 29 is the second well to reach the deep zone in the Midway field, where drilling was stopped at 2924 feet. The last core showed very promising oil sand for about 40 feet, but the 8⅝-inch oil string was stuck 200 feet off the bottom. This well is an offset to Republic Petroleum Co.'s deep sand well which came in around 2800 feet some weeks ago for 1200 barrels.

At Rincon one small well was completed during the past week, giving the new field a total of 12 producers making slightly less than 3000 barrels combined. Miley Oil Co. has reached a total depth of nearly 4800 feet and it is reported that considerable of the last 100 feet was good looking oil sand. Many believe that deeper drilling in this field will find a prolific deeper sand.

More Water Appears In Hendricks

HOUSTON, May 26.—A second well is showing water encroachment in the north end of the Hendricks field, Winkler county. It is Southern Crude Oil Purchasing Co.'s No. 1, tract 88-K, in the northeast corner of Sec. 41, Block 26. Previously, the C-2 well of Cranfill & Reynolds, Inc., in Sec. 33, had been the only north end completion to show water or emulsion.

The Southern Crude well began showing 5 per cent water while flowing 685 barrels daily, pinched. It came in May 5 for 4420 barrels daily at 2876 feet, or 447 feet in the lime horizon.

A half mile north of production, Murchison and Cranfill Bros. are completing their H-1 Hendricks test on a 5-acre tract in the northeast quarter of Sec. 33, Block 26. It found top of the pay at 2820 feet and, at 2850 feet, was making 30 barrels an hour through a one-inch choker. Lime was topped at 2585 feet. It was being drilled deeper at the end of the week in trying to increase potential production.

In the older part of the field wells that had gone "dead" in upper lime pays were being taken down to deeper producing horizons. Independent Oil & Gas Co.'s No. 1, southwest corner of southwest quarter of Sec. 34, Block B-5, flowed 1400 barrels in 24 hours after deepening to 2919-2920. It had gone entirely to water in the upper pay.

Gulf Production Co.'s A-5 Hendricks, in Sec. 34, Block B-5, flowed 987 barrels in one hour after deepening to 3040 feet. It started showing 1 per cent b.s., however, and was quickly pinched. At total depth the Gulf well is 597 feet in the lime.

Under prorating rules effective in Winkler county total production is not affected by increased flowing capabilities of deepened wells. Greater ultimate yield probabilities are indicated by their performance, however; and the raising of potential production will affect prorating allowances when figured for the first half of June.

Yates Well Extends Area Of Big Production

HOUSTON, May 26.—Potential production comparable to that in the central part of the Yates field, Pecos county, has resulted from completion of the A-19 test of the Mid-Kansas & Transcontinental partnership, in Sec. 31, Block 194.

After drilling four feet into the lime pay found at 1100 feet, the well flowed 932 barrels the first hour. It is now pinched to conform with Yates field prorating practice.

Although the A-19 well adds little to the field total of proved acreage its production showing increases materially the prospects for other big wells in the south part of the Yates area.

New Texas Area Opened In Jones County

HOUSTON, May 26.—Two and a half miles north of the Noodle Creek field, southwestern Jones county, a test of the Huconey Gas Co., on the J. W. Tiner land, has either opened a new oil field or extended the previously productive area. At drilling depth of 2530 feet, four feet in the pay, the well flowed 78 barrels of 40.7 A. P. I. gravity oil in 18 minutes.

The discovery well of the Phillips Petroleum Co., in the Noodle Creek field made maximum production of 945 barrels daily, when completed about two years ago.

Pay found at the 2500 foot level in the Jones county territory and slightly deeper in the northeastern part of Fisher county, which adjoins Jones on the west, belongs to the Strawn series geological beds.

Service and Good Merchandising Brings Success in Greasing Business

By Roger B. Stafford
N. P. N. STAFF WRITER

CLEVELAND, May 28

"HOW can we be assured that our car lubrication business will be profitable?" is a question many oil marketers will ask.

There is no assurance of success. Car lubrication requires just as much business acumen as any other business. Reliable service and sound merchandising are the keys to success, and these two things spring from good management. Good management implies that adequate prices will be charged for the service.

Some of the difficulties encountered by oil companies in the past in this service have been due to managerial errors. Men unfitted for the work have been placed on lubrication jobs much to the distress of car owners. Employment of men unsuited to the work only alienates patronage. These men may be whizzes at selling gasoline and oil and, if they are, they should be kept at that work. The grease lift or pit requires someone who will take interest and care in each job.

A few companies have found it profitable to sublet the greasing concession. This is done by the Larkin Co. at its Rochester, N. Y., station. Along this line the Cardinal Petroleum Co., Muskegon, Mich., has this to say:

"Our greasing business was not what could be termed a success before we turned it over to the present fellow, a former employe and an expert in greasing cars. It is a difficult item to supervise and check up on on account of the majority of cost being labor. We had several greasers on the job without any profit in it. Therefore, we decided to lease this concession to a more conscientious fellow on his own hook and he pays us a flat rental for the space and equipment, and buys all his own grease from us at wholesale.

"This arrangement has worked out better to date, at least from our angle, as we have a steady income for the concession, the wholesale profit on the grease and it requires no supervision from us.

"We do not have a greasing palace, however, where we could possibly afford to hire a superintendent. Then the situation might be different. All we have is a large service station site with plenty of room to one side for use in summer and a small room in back suitable for winter use."

When a thorough job is done motorists will not kick at the price. Greasing is a mussy job at best and one company has used this apt advertising slogan for several years, "Let us do your dirty work."

Prices for the work vary widely and the amount of service given at a flat price also varies. To get an idea of prevailing prices NATIONAL PETROLEUM NEWS sent questionnaires to 200 oil companies in many parts of the country asking what they charged, it being assumed that competition would make prices in each community nearly the same.

Usable answers were received from 84 companies. The questions were:

1. Do you make a flat charge for chassis lubrication or do you charge by the number of fittings?

2. Do you charge for spring spray, or spray springs free with a chassis

A sheet used by the Gay Oil Co., Little Rock, Ark., with its lubrication service. The bills are made in duplicate. One is given the customer and the company retains the other. The customer can quickly see for what his money went

THE GAY OIL CO. Ticket No. .....

Automotive Lubrication Service

Service Station No. ..... Date .....

Owner ..... License No. .....

Address ..... Make .....

5M Sets—10-27—J.F.H.Co.

MOTOR — TRANSMISSION — DIFFERENTIAL	Qt.	Grade	Price	
Crank Case Drain and Refill				
Transmission Replenished				
Differential Replenished				
TOTAL A				$

CHASSIS AND SPRINGS COMPLETE	Price
Ford	.50
Chevrolet, Star, Baby Overland	.75
All Others	1.25
TOTAL B	$

CHASSIS PARTIAL	Ford	Others	
Front Axle and Steering Assembly	.25	.40	
Clutch Collar		.10	
Universal Joints	.15	.20	
Rear Axle Assembly Except Differential	.15	.15	
Spring Leaves (with or without) Cover Sections	.30	.40	
TOTAL C			$

Alemite Fittings Installed	Part No.	Number Installed	Amount
TOTAL D			

MISCELLANEOUS			
TOTAL E			

TOTALS A		
B		
C		
D		
E		
GRAND TOTAL	$	

Served by .....

Received Payment

.....
Manager

lubrication or crankcase change?

3. Do you oil or grease engine parts, such as distributor, generator, fan shaft, starter and such when you lubricate chassis?

4. Do you grease free webbing on cowl and radiator shaft to prevent squeaks?

5. Do you try to stop body and chassis squeaks; if so do you charge extra or is this service included in the chassis lubrication price?

6. Do you check grease in transmission and differential housings as part of the chassis lubrication job and charge only for whatever material is needed?

7. What extra charge do you make for oiling Hudson, Essex or other oil clutches?

8. What charge do you make for pulling and repacking rear wheels?

9. What charge do you make for refilling front hub caps?

10. If hub caps are equipped with pressure fittings, is hub lubrication included in chassis lubrication or is extra charge made?

To question No. 1 77 replied they made a flat charge and six that they charged by the number of fittings. One did not answer this question.

To question No. 2 37 replied they sprayed springs free and 42 that they either charged extra or did not spray springs.

To question No. 3 75 said they included the various lubrication items in a chassis lubrication job and nine that they did this only on request or not at all.

To question No. 4 46 replied they greased or oiled the webbing and 35 replied they did not.

To question No. 5 55 replied they tried to locate and stop squeaks when a complete lubrication job was done and 28 replied that work was not part of their regular service. A few replied they charged extra on a time basis for this work and a further charge if a penetrating oil was used.

To question No. 6 75 reported they checked transmission and differential and charged extra for the compound used. Six replied they did not check these parts except on special request.

To question No. 7 46 replied they oiled clutches and 38 made an extra charge. Clutches were not oiled by 26, some of whom said the work should be done by the automobile dealer's service station. Twelve of the 38 that charged extra, charged only 25 cents for oiling the clutch, one 35 cents, 21 50 cents, three 75 cents, and one $1. One company charged 25 cents when the clutch was oiled at the time of a complete chassis lubrication and 50 cents when it was done specially. Three companies charged only for the volume of oil used.

To question No. 8 only 13 reported they pulled and repacked rear wheels. The extra charge was 25 to 50 cents a wheel. Forty-three replied they did not pull the wheels, many saying it was an auto mechanic's job. However, when rear axle bearings were fitted with pressure fittings the axle was greased with the rest of the car.

To question 9 26 said they charged extra, 10 to 25 cents a wheel, for refilling hub caps, but 43 reported they made no extra charge, some qualifying the latter statement by limiting the volume of grease and charging when more grease than their limit was required.

Answers to question 10 indicated that hub caps equipped with pressure fittings are served with the rest of the chassis fittings.

Here are some of the prices charged, the low prices being for Fords and often for other light four-cylinder cars, next higher for light 6's, the next higher for the medium 6's and light 8's, and the highest prices for cars of the high price field. Some companies have only two or three classifications:

New York City—$1.50 flat.

Appleton, Wis.—75 cents to $2.

Ann Arbor, Mich.—Alemite schedule.

Akron, O.—$1, $1.25, $1.50, $2.

Alton, Ill.—$1, $1.50.

Ardmore, Okla.—$1.50 average.

Belleville, Kans.—50 and 75 cents, $1.

Birmingham, Ala.—$1 average.

Baltimore 50 cents, 75 cents, $1.25. Trucks $1.25 to $2.50.

Colby, Kans.—$1, $1.50 and $1.75.

Carlinville, Ill.—75 cents, $1, $1.25, $1.50, $2. Cars with one-shot systems $1.50, and all small cars with four-wheel brakes $1.25.

Cincinnati—$1, $1.25, $1.50, $1.75. Special graphiting service $1 to $1.90.

Columbus, Ga.—$1 flat.

Cleveland—75 cents, $1, $1.25, $1.50, $2, $2.50.

Chicago—$1.25 to $2.50.

Columbus, O.—75 cents to $1.50.

Colville, Wash.—$1.25 and up.

Casper, Wyo.—75 cents, $1 and $1.25.

Denver, Colo.—50 cents to $1.75.

Duluth, Minn.—$1.25, $1.50 and $2. Trucks, $1.50 to $4.

Dubuque, Iowa—50 cents, 75 cents, $1, $1.25, $1.50.

Eau Claire, Wis.—25, 50 and 75 cents.

Enid, Okla.—$1, $1.25, $1.50, $2.

Fort Wayne, Ind.—50 cents to $1.50.

Fall River, Mass.—Fords 75 cents, others $1.25. Small trucks $1.25; large trucks $1.75.

Freeport, Ill.—75 cents, $1, $1.50, $2. Light cars with four-wheel brakes $1.50.

Greensboro, N. C.—75 cents, $1, $1.25.

Hancock, Mich.—50 cents to $2.

Hannibal, Mo.—75 cents flat.

Lynn, Mass.—Ford 50 cents; others $1 to $2.50.

Lansing, Mich.—Ford 50 and 75 cents, others $1.

Louisville, Ky.—Four-cylinder cars 75 cents; 6's and 8's $1.25.

Milwaukee—Alemite schedule used.

Madison, Wis.—Fords 75 cents and $1; others $1.50 and $2.

Mason City, Mo.—50 and 75 cents, $1.

McLeansboro, Ill.—50 and 75

This rate card was published by the Akron Oil Co., Akron, O., and distributed to its own stations and to other companies as an idea of charges that should be made for car lubrication. It omitted its name from the cards so other companies could use them if they desired. This stunt resulted in stabilization of prices in Akron

Official Price List on Greasing
PASSENGER CARS

ALEMITE
ZERK
DOT

MAKE	CYLINDER 4	6	8
Ajax		1.25	
Apperson		1.50	1.50
Auburn		1.50	1.50
Buick	1.50	1.50	1.50
Cadillac			2.00
Case		1.50	1.50
Chalmers		1.50	
Chandler		1.50	1.50
Chevrolet	1.00		
Chrysler 80		2.00	
Chrysler 70-60		1.50	
Chrysler 58		1.25	
Cleveland		1.50	
Cole		2.00	
Cunningham		2.00	
Davis		1.50	
Diana		2.00	
Dodge		1.50	
Dort		1.25	
Dusenberg		2.00	
Durant		1.50	
Earl		1.25	
Elcar		1.50	2.00
Essex	1.25	1.25	
Flint		1.50	
Ford	1.00		
Franklin		1.50	
Gardner		1.50	1.50
Hudson		1.50	
Hupmobile	1.50	1.50	1.50
Jewett		1.50	
Jordan		1.50	1.50
Kissell			1.50
Lincoln			2.00
Locomobile			2.00
Marmon		2.00	1.50
McFarlan		2.00	2.00
Mercer	2.00	2.00	
Moon		1.50	
Nash		1.50	
Oakland		1.50	
Oldsmobile	1.50	1.50	1.50
Overland	1.50	1.50	
Overland Whippet	1.25		
Packard		2.00	2.00
Paige		2.00	
Peerless		1.50	2.00
Pierce Arrow 80		2.00	2.00
Pierce Arrow 36 and 38		2.00	2.00
Pontiac		1.25	
R & V Knight		1.50	
Reo		1.50	
Rickenbacker		1.50	1.50
Roamer	2.00	2.00	2.00
Rollin		1.50	
Rolls Royce			2.00
Star	1.50	1.50	
Stearns-Knight	1.50	1.50	
Studebaker	1.50	1.50	
Stutz	2.00	2.00	2.00
Velie		1.50	
Wills-St. Claire		2.00	2.00
Willys Knight	1.50	1.50	
Wolverine		1.50	

Universal Joints	.25
Spring Spray	.50
Ford Spring Spray	.25
Clutches	.50
Buick 4-Wheel Brakes, extra	.50
Wash out Clutch	.50
Flushing Oil—½ Gal. 20c; 1 Gal.	.35
Gear Grease	.30 @ lb.

If you can't afford to install the Dubbs Cracking Process you will soon not be able to afford the luxury of operating a refinery without it

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

cents, $1. Trucks $1.50.

Nashville—50 cents to $1.25. Trucks $1.25.

New Orleans—Sliding scale according to number of fittings.

Norton, Kans.—50 and 75 cents, $1.

North Platte, Neb.—50 cents to $1.

Ogden, Utah—75 cents to $1.75.

Olean, N. Y.—75 cents, $1, $1.25.

Omaha, Neb.—75 cents, $1, $1.25, $1.50.

Pensacola, Fla.—75 cents, $1, $1.25, $1.50, $2.

Peoria, Ill.—$1, $1.50.

Rockford, Ill.—$1, $1.50, $2.50. Four-wheel brake cars $2.

Rensselaer, N. Y.—$1, $2.

Rockland, Me.—$1, $1.50, $2, $2.50.

St. Louis—75 cents, $1, $1.50, $2, $2.50.

Sterling, Colo.—$1.

Springfield, O.—75 cents, $1, $1.25, $1.50.

Sheboygan, Wis.—75 cents, $1, $1.50, $2.

Syracuse, N. Y.—75 cents, $1.50, $2.

Saginaw, Mich.—$1.25, $2.25.

Springfield, Mass.—$1.75 up on material plus labor basis.

South Haven, Mich.—$1.25, $1.50, $2, $2.50.

Tacoma, Wash.—Alemite schedule used.

Tulsa—75 cents flat.

Vivian, La.—50 and 75 cents, $1.25.

Willmar, Minn.—75 cents, $1.25, $1.50. Trucks $2.

Winona, Minn.—$1 to $3, depending on condition of fittings and whether clutch must be oiled.

Wichita Falls, Texas—$1, $1.25, $1.50.

Worcester, Mass.—$1, $1.25, $1.50, $1.75.

When springs are sprayed with a chassis lubrication job, the general practice seems to be to use waste crankcase oil or a flushing oil. When a graphite or penetrating oil is used a special charge of 50 cents to $1 is made by most companies.

The Cincinnati Oil Works Co. does a special graphiting job which includes lubricating these parts: hinges on doors, hood pads, dash, between hood and radiator, clevice in bumper, wooden spokes, snubbers, shackles, hood and body sill, body bolts, spring seats, brake mechanism, tire rims, band around gasoline tank, and place where body and fenders meet. The price of this service is $1 for Fords, $1.25 for Chevrolets and cars of similar size, $1.50 for medium sized cars, and $1.90 for large cars.

This is the price schedule of the Marine Oil Co., New Orleans, on a per fitting basis: one to 10 fittings, 25 cents; 11 to 20, 40 cents; 21 to 30, 55 cents; 31 to 40, 70 cents; 41 to 50, 85 cents; 51 to 60, $1, and all over 60 at 1½ cents each. It charges for the amount of grease used in hub caps, wheel bearings, universals, and steering gear. Oiling springs cost 15 cents for each spring.

Many companies charge 4 or 5 cents per fitting for a part lubrication job.

For transmission and differentials most companies charge 25 cents a shot but a few make a special price of six shots for $1.

Lifts are used by many companies to attract motorists. These are much more spectacular than a rack and less expensive to install than a greasing palace.

C. E. Mills Oil Co., Syracuse, N. Y., tries to hold its greasing trade for repeat business. With each chassis lubricating job is given a claim check. Ten of these checks are good for a free lubrication. In other words the regular customers get 10 per cent discount if they get the service 10 times.

One middle western company which has a large greasing palace has its gasoline pump men plug for crankcase and chassis lubrication business. They get a commission on all jobs they send to the oil and grease house.

Each spring and fall the Harbor Lite Oil Co., Duluth, Minn., sells its customers the idea of having their transmission and differential housings steamed out and refilled with new lubricant, E. T. Johnson of that company wrote. The charge is 35 cents a pound for the new compound, which includes the service. At the company's super service station as much as 300 pounds of transmission oil has been sold in one day, Mr. Johnson wrote.

Continental Oil Co., Denver, adds 25 cents to its list prices on cars that are equipped with old style grease cups, and deducts 25 cents when they are equipped with oil cups. This company urges its operatives to make it clear to the customer just what is included in a complete grease job to prevent dissatisfaction. Its men are prohibited from removing wheels except wire wheels which require no change in adjustment of bearings.

Sherwood Bros., Inc., Baltimore has a graduated scale on truck lubrication. Trucks of one and one-half tons or less are $1.25; two and two and a half $1.50; three to four-ton trucks $1.75. Trucks of five tons capacity $2, and of seven tons capacity $2.50.

Stoll Oil Refining Co., which operates seven greasing stations in Louisville, Ky., scales its truck greasing prices from $1 for half-ton trucks to $2.50 for three and a half-ton trucks. It allows a 20 per cent discount if the trucks are greased at lease once each month. It makes an extra charge for lubricating the Essex, Chrysler, Cadillac, Hudson, Maxwell and Rickenbacker clutches.

Here Are Sample Prices

HERE is a price schedule for chassis lubrication service of a Cleveland oil company, showing the divisions it makes of the old and new cars:

CLASS "A"—$1.00

Ford	Star
Chevrolet	Gray

CLASS "B"—$1.00

Auburn	Liberty
Buick 4	Marmon
Chalmers	Maxwell
Cleveland	Moon
Columbia	Nash
Chrysler 52-62-72	Oakland
Dodge	Oldsmobile
Durant	Overland
Elcar	Pontiac
Gardner	Rickenbacker
Haynes	Studebaker
Hupmobile	Templar
Jewett	Whippet
Jordan	Velie
Lexington	

CLASS "C"—$1.50

Buick 6	Packard Single Six
Case	Paige
Chrysler 80	Peerless
Davis	Premier
Flint	Rauch Lang Electric
Franklin	R. V. Knight
Handley Knight	Standard
H. C. S. Special	Stearns Knight
Hudson	Stephen
McFarland	Sterling Knight
Marmon 8	Westcott
Cole	Willys Knight
Mitchell	Wills St. Clair
Moline Knight	

CLASS "D"—$2.00

Cadillac	White
La Salle	Packard
Cunningham	Winton
Pierce Arrow	

CLASS "E"—$2.50

Fiat	Locomobile
Lincoln	

NOTE: All new cars with self lubricating systems are to be included in Class "B." Erskine 6 no lubrication.

Oil Men on Committee To Greet Chamberlin

CLEVELAND, May 26.—When Clarence D. Chamberlin comes to Cleveland June 2 under the auspices of the Pennzoil Co. and the Columbia Refining Co. he will be received by a committee of civic and business leaders from Cleveland and western Pennsylvania. Oil representatives on the committee are:

L. W. Young, president, South Penn Oil Co., Pittsburgh; P. J. Curry, vice-president, South Penn Oil Co., Pittsburgh; Charles L. Suhr, president, the Pennzoil Co., Oil City, Pa.; R. A. Browne, manager, the Pennzoil Co., Oil City; and Edmund Walton, president, Burt Zimmerman, manager, and William Pate, Columbia Refining Co., Cleveland.

Chamberlin is to make two addresses and attend a banquet in Cleveland.

Lucey Moves Los Angeles Office

LOS ANGELES, May 28.—Lucey Products Corp. announces the removal of its office from 1515 E. 7th Street, to 5047 Santa Fe Avenue, Los Angeles.

Origin, Development of Water Flooding

By Forest D. Dorn*

Presented before Eastern Division, Production Engineering Section, American Petroleum Institute, Bradford, Pa., May 17

WATER flooding of an oil sand is as old as the business of producing oil in the United States. The famous Drake well near Titusville, Pa., was the first well drilled for oil in this country and was the beginning of the most important industry in the world today. Those pioneers not only discovered oil but they also discovered what we are prone to call modern methods of recovery—"water flooding."[1]

"The early operators on Oil creek knew nothing about casing.[1] Wells were drilled 'wet' no effort being made to shut out the surface water; consequently when oil was struck, it met a static pressure of water corresponding to the depth of the well.

"In new and shallow territory the pressure in the rock was sufficient to hold the water in check and prevent it from entering the oil sand and sometimes it had force enough to eject a column of water from the hole and flow. But as developments progressed and oil currents began to be diverted toward numerous outlets through pumping and flowing wells, it often very naturally occurred where the circumstances favored it, that this column of water in a well just completed would force itself into the oil sand, driving the oil before it.

When the new well was tubed and seedbagged, it frequently took several days pumping to relieve the sandrock of the water forced into it, and regain oil. These troubles increased more and more as the territory became older and the pressure of gas in the rock decreased through the removal of large bodies of oil. At that time the seedbag which prevented the surface water from passing down, was affixed to the tubing, and any difficulty in the working barrell or valves which necessitated the withdrawal of the tubing (and these contingencies occurred frequently), involved the letting in again of surface waters upon the oil rock."

"Small casing (3¼-inch) was first introduced in 1865. This held the seedbag on its lower end and extended down below the fresh water veins, so that the tubing could be inserted inside of it and withdrawn at pleasure without letting in the water. Many of the old wells were then cased; the abandoned holes were filled up or stopped with a wooden plug above the oil sand to prevent the further admission of water.

FOREST D. DORN
President of the Forest Oil Corp.

"As a general rule, the first oil wells in a pool produce but little water with the oil, unless they are located in shallow territory where the oil rock lies in such a position as to be somewhat affected by communication with the surface. The movement of water through the oil sands, called 'flooding,' is an abnormal condition following development and occurs only after the oil has been partially exhausted from the rock. It may frequently be attributed to the letting down of surface water through abandoned well-shafts, no precautions having been taken when wells were abandoned, to effectually shut off all communication between upper, or water bearing rocks, and the oil sands."

From this discussion it is readily seen that water flooding was practised, but unintentionally, for six years after the Drake well was drilled. Water was intentionally introduced in the center of the Pithole pool in 1865. The effect was to drive the remaining oil in all directions, traveling fastest towards the points of least resistance. But like all new discoveries the process was used by all the operators in their haste to take advantage of something that would give them more oil in a shorter time.

Frequent repetitions of this operation finally brought ruin not only on the operator himself but also on his neighbor adjoining. In the abandonment of a well thus spoiled, or of one which had been drilled and proved unproductive, no care was taken to prevent water from entering the oil rock. From these unsystematic methods it happened that nearly all farms along Oil creek were very much injured by "trapping" before the true situation of affairs was rightly understood. Pithole was practically abandoned in 1867.

In other words, a new field had been discovered, developed, flooded and apparently exhausted within less than eight years after the oil business had started in this country.

From this disastrous beginning a reaction set in with the majority of the operators against flooding. However, a few evolved some rules of procedure that are still in use today. Again quoting from Carll:

"The flooding of an oil district is generally viewed as a great calamity, yet it may be questioned whether a larger amount of oil cannot be drawn from the rocks in that way than by any other, for it is certain that all the oil cannot be drawn from the reservoir without admission of something to take its place.

"If one company owned all the wells drawing upon a pool, and had accurate records of the depth and characteristics of the oil producing stratum in each well, it is quite possible that some system might be devised by which water could be let down through certain shafts, and the oil forced towards certain other shafts where the pumps were kept in motion, and thus the rocks be completely voided of oil and left full of water. As it is, however, no systematical plan of action can be adopted. The careless handling of one well, by which water is let down to the oil rock, may spoil several others belonging to different parties. A clashing of interests at once arises and is likely to result in disaster to the whole district.

"It is an easy thing to theorize as to how water currents might conduct themselves, but quite another to show precisely how they do act. for we can only have, at best, a very imperfect knowledge of the constitution of the sandrock, and therefore cannot foresee all the contingencies dependent upon details of structure, which may arise to thwart the most shrewd and judicious calculations.

"In judging of the probable effects

1 Carll, J. F. The geology of the oil regions of Warren, Venango, Clarion, and Butler counties. Second Geological Survey of Pennsylvania. Vol. 3, 1880, pp. 256-269.

*President, Forest Oil Co., Bradford, Pa.

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of the introduction of water into any particular oil district several things are to be considered:

"1. *The time of flooding*—whether early in the progress of development, while yet a large percentage of oil remains unexhausted, or at a later period after the supply has suffered from long continued depletion.

"2. *The structure of the rock*—whether regular and homogeneous throughout, or composed of fine sand interbedding connected and irregular layers of gravel, sometimes lying near the top and at others near the bottom.

"3. *The shape of the area being flooded.*

"4. The position of the *point at which water is admitted*, in relation to the location of the surrounding wells still pumping oil.

"5. *The height* (which governs the pressure) *of the column of water* obtaining admittance.

"6. *The duration of the water supply.*"

Huntley,[2] Johnson,[3] and others agreed with Carll, that the fault lies not in the theory but in the attempts to concentrate oil by flooding without sufficient data as to underground conditions.

The Bradford field was discovered in 1869 but flooding was not practised until about 30 years ago.

The flooding started accidentally from old abandoned wells which had been improperly plugged or had not been plugged at all. Through these old wells fresh water from sands near the surface entered the oil sand and drove the oil to the pumping wells nearby. At first the flooding was looked upon as an unmixed evil, but when it was found that yields of oil wells were greatly increased and were maintained for periods of several years, and more profits were being derived than otherwise could have been obtained through an indefinite term of years by ordinary pumping, some of the operators concluded that flooding was beneficial and endeavored to make use of the principle to increase production of their properties.

For many years flooding was haphazard, water being let into a central well and allowed to extend gradually outward as an expanding circle. If the oil sand were level and the conditions were uniform in all parts, the water entering from one well would spread in an ever-widening circle whose area would increase as the square of the radius. If in the first year the water reached 100 feet from the well, in the next year, assuming the same quantity to enter the sand, the water would travel but 41.4 feet farther; in the third

(*Continued on Page* 64)

2 Huntley, L. G. Possible causes of the decline of oil wells and suggested methods of prolonging yield. Technical Paper 51—Bureau of Mines 1913.

3 Johnson, R. H., and Huntley, L. G. Principles of oil and gas production. John Wiley & Sons, New York, 1916.

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Refinery Credit Losses Small; Most Jobbers Discount Gasoline Bills

By J. C. Chatfield
N. P. N. STAFF WRITER

TULSA, May 26

A VAST majority of the jobbers buying gasoline and kerosene in the Mid-Continent field are discounting their bills. More than half of them are discounting their lubricating oil bills, according to statements by credit managers in the Tulsa district.

Bad debt losses of the refining industry throughout the United States have been low for the past three years according to a recent survey by the petroleum refiners' division of the National Association of Credit Men. In none of the past three years have credit losses exceeded two tenths of one per cent.

In most manufacturing industries credit losses are not considered excessive when they do not exceed 50 cents per $100. This compares with refinery credit losses of 18.999 cents per $100 sales by 49 companies in 1925, a loss of 17.359 cents per $100 in 1926 by 51 companies and losses of 18.49 cents per $100 sales in 1927 by 52 companies.

A majority of the refining companies replying to the questionnaire of E. B. Moran, secretary-manager of the refiners' division of the National Association of Credit Men, do business in the Mid-Continent field, but the report contains the experience of a number of companies in other areas. Six out of the 52 companies showed no credit losses in 1927. The highest credit loss sustained by a refining company was 75 cents per $100 sales.

In recent years the terms on gasoline and similar products of net 30 days and one per cent off for payment within 10 days have become thoroughly standardized in the refining industry. With railroads moving gasoline from refinery to jobber more quickly and retail sales keeping the commodity turning over from one to many times per month, jobbers are becoming more and more used to discounting their bills and requests for more than 30 days terms are viewed with suspicion by credit managers.

Several credit managers in the Mid-Continent field have reported that from 80 to 90 per cent of their gasoline and kerosene invoices are discounted by jobber customers. This is true also of fuel oil, most of which goes to railroads and manufacturing enterprises or public service companies which have ample cash resources for taking advantage of discounts.

A slight tendency towards slowing up of collections has been noticed by some refinery credit men in recent weeks. This is due to the fact that many jobbers have been buying some gasoline for storage on account of the rising price of motor fuels in the Mid-Continent. Another reason is that jobbers with a large farm trade are coming to the time of the year when they must fill up their farm trade's storage and wait for payment until after crops are in. The narrowing margin available to jobbers between delivered prices of gasoline and the tank wagon schedules possibly has some bearing on the slowing up of collections.

One of the largest refining companies in the Mid-Continent field found that only two per cent of its accounts were past due on Jan. 1,

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American industries from the air. The Sinclair refinery at Kansas City, Mo., showing the stills at the left and the tank farm

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Winning Design for Wayside Stand

First prize-winning design of wayside stand and filling station, in the second contest for the improvement of wayside refreshment stands and filling stations.

The first contest results published in May 16 issue page 93 was for stands already in operation, while the second called for original designs of stands to improve present conditions.

Fitness of the design as a whole to meet the needs of the problem, artisticness exellence of plans, practicability and economy of construction were the bases of award for the second contest. This design was submitted by Henry Ives Cobb, Jr., New York.

The campaign was initiated by Mrs. John D. Rockefeller, Jr., through the Art Center of New York and the American Civic Association of Washington, D. C., and is supported by contributions from Adolf Gobel Co., New York.

1928. This same company now has about 97 per cent of its business on a current basis.

The treasurer of one company reported that 85 per cent of the invoices of his company in dollar value are being discounted at the present time. Of the 15 per cent remaining all except about three per cent pay within 30 days. The remaining three per cent are slow.

Another company has about 90 per cent of its invoices discounted by customers. Of the remaining 10 per cent about half paid within the 30-day period and the remainder have to be pushed for collections.

Refinery credit managers generally are exercising greater care in granting credit to jobbers. They are demanding financial statements at frequent intervals and checking first orders before shipping.

The tendency to tighten credits comes from a realization by the credit men that competition is keen in the jobbing business, which they consider to be heavily overbuilt. The credit men fear that, in any period of short margins, they may be saddled with heavy losses due to the failure of jobbers who may be unable to pay because of small gallonage through expensive distributing channels.

In some cases refiners are going to "two, ten, thirty" terms on lubricating oils, although standard practice has been to allow a two per cent discount for payment within 30 days, with net terms for payment within 60 days. Some terms on lubricating oils have extended as far as 90 and 120 days in extreme cases and at least one large company is said to be selling lubes on consignment.

Most credit managers take the position that credit terms should not exceed the length of time necessary for a customer to turn over the commodity purchased. In the case of lubricating oils they are urging sales departments to ask their customers to buy in less than car load lots unless they can pay in less than 90 to 120 days.

Origin, Development of Water Flooding

(*Continued from Page* 61)

year 31.8 feet farther; and each succeeding year the rate of movement would become less and less. But because of a number of factors always or ordinarily present the actual decrease in rate is much greater. Among these factors are the increased resistance with the distance penetrated and the quantity of oil accumulated ahead of the water, a tendency for the pores of the sand to become clogged with silt and waxes and for the flooding well to become choked with material caved from the walls of the hole. But if the water enters the sand, not from one center but from a row of wells, or from two or more points in the immediate vicinity, the advance of the flood does not decrease so rapidly from year to year.

The perimeter of the enlarged circle, in circle flooding, became practically a straight line with references to individual well locations and from this was evolved the "line" flood in which consists of a central row of water wells with rows of oil wells staggered on either side.

A third type is called the "boundary" flood in which an operator drills water wells and oil wells alternately along his property lines, later drilling successive rows of oil wells within the interior of the tract.

In each of the above methods as oil wells are watered out by encroaching floods they are converted into water wells and locations in the path of the flood are drilled for oil.

A fourth type of flood is designated as the "five spot" and consists in simultaneously drilling alternate rows of water wells and oil wells staggered with respect to each other. In this way, each oil well is in the center of a square of four water wells. Other types or patterns from the "four spot" to any number of wells are used. The object being to have a pattern that is capable of being expanded indefinitely to fit any particular shape and size of property.

In the circle flood the force is a constantly diminishing one and it is impossible to maintain an even spacing of wells as the water advances. In the line flood the water from the two intake wells converges on an oil well and it is possible to maintain an even pattern of wells across an entire property or to put in as many lines as are necessary to deplete a property in a given time.

For proper flooding it is essential: (1) to allow for different rates of water travel in the different layers of the sand; (2) for different rates of travel in different directions from the intakes; (3) for different rates of travel in different localities; (4) to control as much as possible the line of the water front; (5) to avoid the trapping of oil; (6) to deliver an adequate supply of water to the intakes at all times; (7) to recover the greatest amount of oil in the shortest time possible commensurate with initial expenditure and cost of development.

The water supply for flooding is the ground water from the surface to a possible depth of 300 feet. There is no distinct water-bearing sand, but the water zone follows the general surface topography.

Seminole Operators Find Intermittent Use of Gas Lift Economy Measure

By Lawrence E. Smith
N. P. N. STAFF WRITER

TULSA, May 28

PRODUCING wells by intermittent operation of gas lift in the Seminole district has assumed sizable proportions and has been extended to other fields, such as Tonkawa and the Oxford pool of Kansas.

By this method, the well so operated is on and off production at regular intervals, being timed to maintain its daily production with the least possible use of gas. No general rule can be relied upon as to the frequency of flow, the wells differing materially in the time on production and interval between flow periods. Each case calls for experimentation as to proper method.

There are several advantages to flowing intermittently, one of the chief of these being the release of compressor equipment or, in the same way, lack of necessity for installing new equipment for additional wells drilled. In several instances leases having a shortage of compressors for straight flow are being operated efficiently without additional installation, by intermitting the flow. In other cases leases with compressor capacity adequate for straight flow, by going on the intermittent basis, have retired compressor units from service, thereby reducing operating costs as well as making available the units for other leases or for use if emergency shut downs occur.

Shortage of gas for flowing wells is another reason for operating intermittently. The saving in gas is about proportional to the saving in compressor capacity. For example, one property in the Seminole district, which made 2049 barrels on straight flow on a certain day early this year, produced 2077 barrels by intermitting the flow about a month later.

The operating company was able to shut down one plant of four compressor units, this being 20 per cent of the equipment required to flow the wells and the saving in gas amounted to about 20 per cent. With the available volume of gas in the field steadily declining, the intermittent flow is gaining in scope, as it has been demonstrated it maintains production on a level with straight flowing and is more economical.

View of the "Jat" electrical timer installed

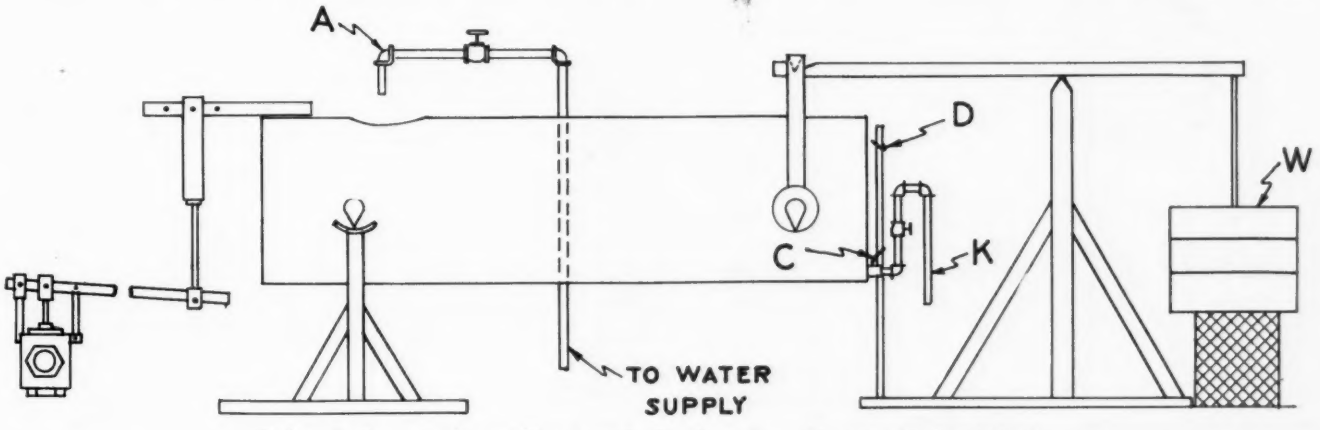
It also enables the operator to make more effective use of the available gas and to delay mixing air with the gas. Wherever possible the operator uses gas, as it reduces the explosion hazard present where air-gas mixtures are used, reduces the volume handled through gasoline plants per gallon of gasoline obtained and prolongs the life of equipment in the wells, air having a tendency to hasten corrosion when in contact with sulfur in the oil or chemical bearing waters.

One company has 11 leases now operated on the intermittent flow principle. On every lease it has been possible either to shut down machinery, using it as stand-by equipment, or to increase production. On several leases both results have been achieved.

With this company, as with others, it is the custom to determine the length of flow and the interval between flows by manual operation of valves at each well for two or three days until the proper timing is secured. Generally the timing ranges from two to 10 minutes for the "on" period and two to 60 minutes "off."

Commenting on intermittent flowing in the Seminole district, C. V. Millikan, of the Amerada Petroleum Corp., said in a paper read at the New York meeting of the American Institute of Mining & Metallurgical Engineers, in February:

"Two to five wells are run from the same group of compressors. The total volume of gas required is sometimes reduced to as much as one-third of that required when it is introduced at a constant rate, without changing the amount of oil production. The maximum pressure required is usually higher, but the average equal to or lower than that required for constant rate of flow. The effect on the wells is usually an irregular rate of flowing which may cause in-



Design of valve controller used by Amerada Petroleum Corp. (See text for description.)

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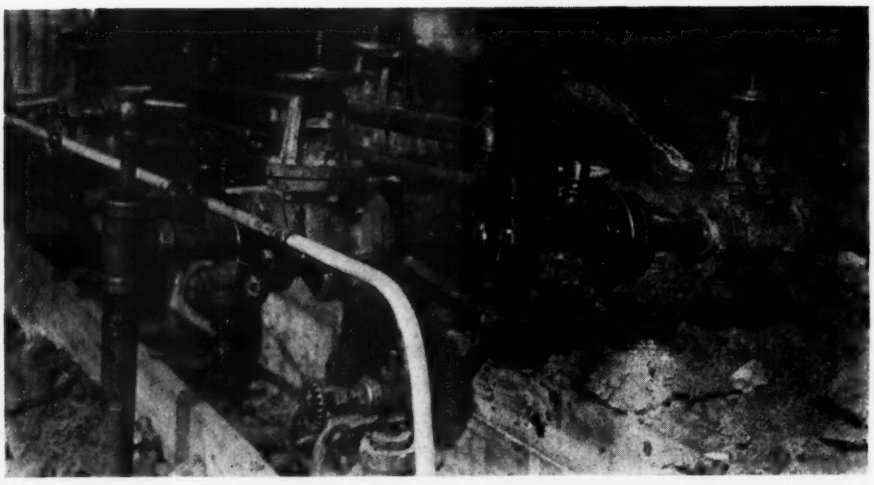


"Jat" automatic control valve on line from compressor to well

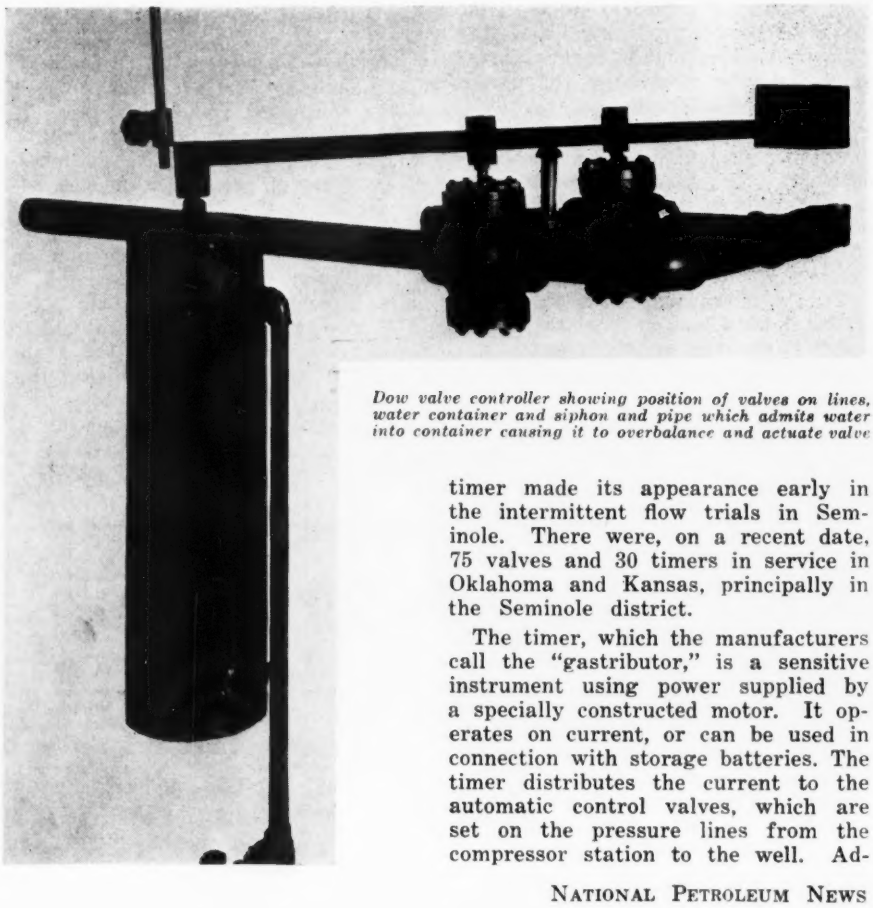
convenience where recycling is practised.

"It would seem that this increase in efficiency is due to less slippage when the gas is introduced intermittently than when it is introduced steadily, and is rather opposite to the more commonly held theory that the smaller the bubbles of gas, when introduced into the column of fluid, the greater the efficiency of the lift."

That production has actually been increased in a number of instances is the experience of several operators. This is probably due to the reduction of pressure on the sand, permitting free drainage into the well during the time the gas is cut off.

An example of increase in production is the Livingston lease of the Indian Territory Illuminating Oil Co., Bowlegs pool. Well No. 10 increased 50 barrels after being put on intermittent flow. No. 2 averaged 300 barrels per day over a 10-day period before being put on intermittent flow. The first two days thereafter it averaged 320 barrels and the next three days 307 barrels. On a recent date its production was above 400 barrels daily. On the two wells the company laid off two 80 horsepower compressors.

After the period of manual operation of valves, the wells usually are hooked up with some form of automatic valve-timing arrangement. The "Jat" system of valves and electrical



Dow valve controller showing position of valves on lines, water container and siphon and pipe which admits water into container causing it to overbalance and actuate valve

timer made its appearance early in the intermittent flow trials in Seminole. There were, on a recent date, 75 valves and 30 timers in service in Oklahoma and Kansas, principally in the Seminole district.

The timer, which the manufacturers call the "gastributor," is a sensitive instrument using power supplied by a specially constructed motor. It operates on current, or can be used in connection with storage batteries. The timer distributes the current to the automatic control valves, which are set on the pressure lines from the compressor station to the well. Ad-

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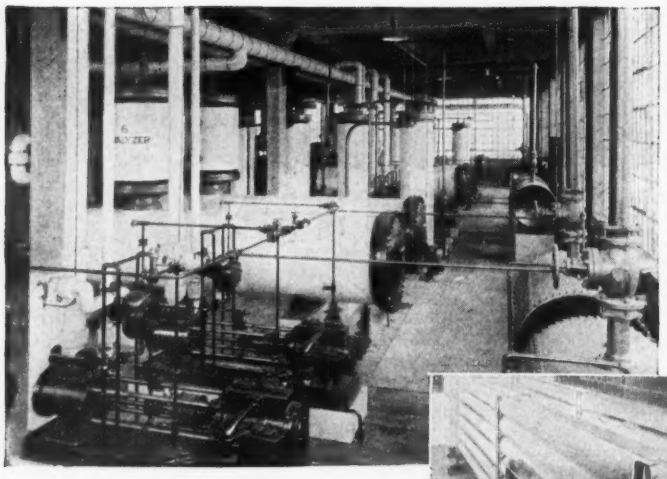
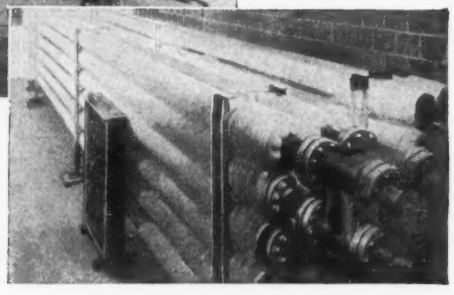


An absorption installation in a large mid-west refinery. Capacity 600 tons.

Below — Carbondale chilling machine installation.



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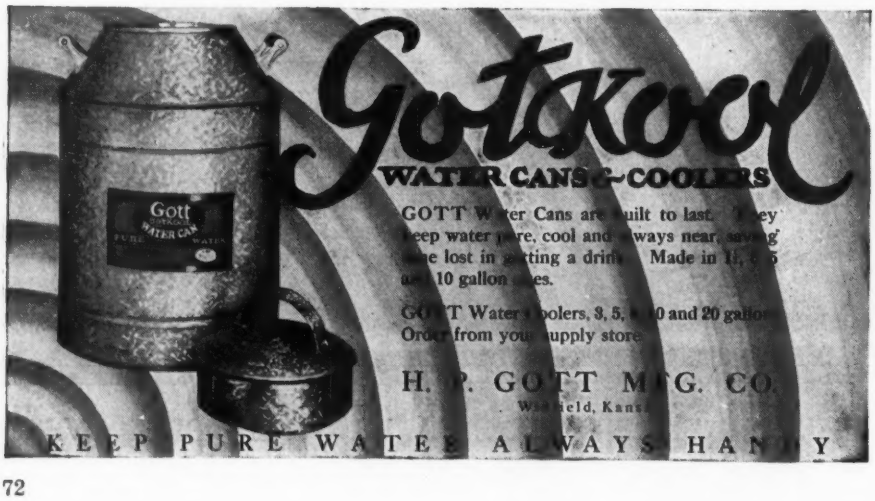
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justments are provided so each well can be timed for its most efficient operation. Wires lead from the contact points to the valves.

The automatic control valves are pressure operated. An auxiliary valve, magnetically controlled, admits and exhausts the operating pressure for the control valves, which are open during the flow period and closed during the accumulation period.

Another method of controlling valves is that designed by D. B. Dow, of the Indian Territory Illuminating Oil Co. The equipment is manufactured by A. J. McEwan & Co., Tulsa. It consists of a water container, made of large casing, suspended on an arm on whose other end is a weight more than equal to that of the container when empty. The arm rests on a fulcrum in the center and, on either side of this support, is a valve. Water flows into the container, overbalancing the weight at the other end, the container moves downward opening a valve.

A siphon then draws off the water until the weight on the other end of the arm pulls it down, closing the valve opened by the action of the container and opening the other. It can, of course, be arranged to control only one valve. It is timed by regulating the rate of flow of water into the container.

Still another device is one used on a lease of the Amerada Petroleum Corp. It was designed by the company's engineers. A description by one of the staff as to installation and the device in use is as follows:

"A string of 1¼-inch tubing was run inside a string of 2½-inch external upset tubing. Gas is put down between the two tubing strings. The gas is supplied to the well from a connection on the header at 230 pounds per square inch gauge for a period of five minutes and then shut off for a period of 26 minutes.

"The device shown in the sketch is being used to operate the valve. It is primarily a drum made of 10-inch casing suspended at one end by a stationary standard. The other end is supported by a mobile yoke and a weighted lever. Water is admitted through a supply line "A" to the drum at the desired rate.

"When the weight of the water becomes enough to overbalance the weight "W," the loose end of the drum drops and closes the valve on the gas line. The water is then drained out the siphon "K" faster than it is admitted at "A."

"When enough water has been drained out the weight "W" raises the loose end of the drum and again opens the valve in the gas line. Spring catches "C" and "D" hold the drum in place at the end of each stroke, so that there is enough difference in weight to insure rapid movement of the drum before the movement is started."

Who Pays Most of the Gasoline Taxes, Oil Company or Consumer?

By Frank E. Packard*

"Oil Trade Cannot Prosper Under Five-Cent Gas Tax"

FRANK E. PACKARD, tax attorney for Standard Oil Co. of Indiana is not a vigorous opponent of gasoline taxation as a means of raising money to build roads. But he believes gasoline will be over taxed unless the oil industry does something to prevent it.

In a recent speech he said, "The oil industry can not prosper under a five-cent gasoline tax."

In support of this statement he has written the accompanying discussion for NATIONAL PETROLEM NEWS. In brief Mr. Packard makes two main points:

1. If gasoline were over abundant and so cheap oil companies had to sacrifice all their profits to move it, they would begin automatically to absorb more and more of the tax. Thus on a bad market the tax makes the oil man lose money.

2. If gasoline were scarce and prices high, the tax burden on it would make retail prices prohibitive to a large number of users, especially if the tax were as much as five cents. So, on a good market, the tax makes the oil man lose patronage.

Since gasoline taxes have been spreading in America, increasing in amount at the same time, gasoline prices have been low in comparison to prices of other necessities, which did not carry special taxes. Only for this reason has the tax been "painless" to the buyer, who is also the voter.

FRANK E. PACKARD
Tax Attorney for Standard Oil Co. of Indiana

THE incidence of taxation is one of the most vexing questions of economics. Who actually bears the burden of a given tax oft times puzzles its most profound students. Seldom does the taxpayer bear the actual burden.

Who actually pays the gasoline tax, the distributor or the consumer?

The oil industry has seemingly quite generally accepted the theory that the consumer pays it. I do not believe this theory is always true. It is undoubtedly true when demand is in excess of supply and the price high, but under such conditions it might be quite as great a burden through the curtailment of consumption. Let me examine the former question first.

When supply outruns demand, can a tax equal to 25 per cent or more of the cost of an article be wholly passed on to the consumer?

Ordinarily it is said that price is determined by the equation of supply and demand. This is not quite true. Price itself has much to do with supply and demand. The lower the price of a commodity the more of it will be demanded; the higher the price the less will be demanded. To say that price depends on demand is to reason in a circle, since, if price is affected by demand, demand is no less affected by price. The true economic law is that, given a *fixed* supply, demand governs price.

Just here is the rub in the oil business. The supply is, in a manner, fixed. At least price has little or no effect upon supply, and demand alone governs the price. Great supplies of crude oil for which there is no demand are quite as apt to come upon the market when the price is low as when it is high. And on the contrary, new production does not come because the price is high—reversing the ordinary rule that a high price will stimulate supply and a low price retard it.

The classic illustration of this economic phenomenon of a fixed supply, and price depending altogether upon demand, is that of a big crop of strawberries coming on the market. There is no keeping back any part of this perishable commodity. The total quantity must be disposed of, for what it will bring. The producer and the distributor of the strawberries are faced with the problem, not of securing a reasonable return upon the cost of production and distribution, but to get rid of the crop with little or no loss, if possible.

So it is with gasoline. The supply comes on the market regardless of demand, and price does not seriously affect its volume. The supply will increase enormously in the face of an already oversupply, or it will decrease in the face of a brisk demand and a high price.

If the foregoing is true (and I do not believe it can be questioned) in times of overproduction the price of gasoline is fixed, not by the cost of production and distribution and return on investment, but in the same manner as in the case of the strawberries. It must be sold at whatever price it will bring, in order to avert financial disaster.

Under these conditions the effect of the gasoline tax on the oil industry may be disastrous. It lessens the margin of realization between the cost and the selling price (cost meaning the cost of production and

*Tax attorney Standard Oil Co. of Indiana.

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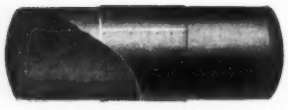

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distribution plus the irreducible burden of freight and tax, and the selling price governed by a fixed supply which must be sold to avoid disaster) until there is no margin or realization left. While the oil man fondly supposes he is passing the tax on to the consumer, it has loosened or destroyed his margin of profit and his business has gone into the "red."

If the buying public will consume enough gasoline, at say 14 cents a gallon plus a 4-cent tax, to keep the industry going, would it not buy the same amount at 16 cents a gallon without tax and give a realization that much greater? Unless the laws of economics are the hollow dreams of scholars there can be no escape from the conclusion that the gasoline tax has just this effect.

I am aware that statistics in support of this proposition are wanting but the oil industry and the automotive industry are comparatively new and saturation points have not been reached. Statistics are being gathered which point to this conclusion. As yet the question of decent roads and the number of cars per given unit of population so enter into the problem that it is difficult to say which one of these several factors is affecting consumption.

There is also the further problem of price structure. It is pointed out that Illinois, without a gasoline tax, has a price which is comparable to the price in surrounding states, minus the tax. This, however, is not brought about by the operation of economic laws but by an arbitrary price structure created by the industry.

This condition in Illinois is accepted as proof that the gasoline tax is passed on to the consumer. As a matter of fact it proves nothing of the kind. It proves only that the industry in Illinois suffers to the same extent as those states having gasoline taxes, because their selling price is governed by the selling price, minus the tax, which prevails generally throughout the economic unit.

If the tax could be removed from this economic unit, I have no doubt that a somewhat higher price level would prevail. But under the present market structure the profits which, in Illinois, should go into the pockets of manufacturers and distributors as a result of a higher price level brought about by the removal of the tax, remain in the pockets of the consumer.

As to the second proposition, that the tax curtails consumption, I am also aware that available statistics are confusing. Kentucky and South Carolina with a five-cent gasoline tax do not show the decrease in consumption that one would expect to find. But here again the question of good roads enters the problem.

Illinois has had a large number of hard surfaced roads for several years, while fairly passable roads are just coming into use in the two former

states. Also the percentage of cars to a given unit of population has been much greater in Illinois for a number of years than in these states. In other words the consumption of gasoline, due to improvement of roads and increasing number of cars, makes a growing demand for gasoline in Kentucky and South Carolina which does not exist in Illinois.

If the percentage of good roads and the automobile saturation were equal, there is no doubt at all that the consumption of gasoline would be markedly less in those states than in Illinois, per unit of population.

In 1928 the purchasing public will pay to the oil companies probably in excess of $250,000,000 in the way of gasoline taxes. The consumer is prepared to pay this amount, plus the amount paid to the oil companies for gasoline, and who will say that a very large portion of the $250,000,000 would not go to the oil companies in increased gallonage and profits if the tax were removed?

This would tend to reduce surplus stocks, and who would say that a considerable amount of it would not find its way into the coffers of the oil industry? Who is prepared to deny that a higher price would not prevail, with increased profits?

F. G. Clapp in Persia

NEW YORK—Frederick G. Clapp, consulting geologist with offices at 50 Church St. here, is inspecting southern Persia oil fields for the government of Persia.

Closes New York Office

NEW YORK, May 26.—The Coastwise Petroleum Co. announces the closing of its New York office immediately. All business in the future will be conducted from its general offices in the Munsey building, Baltimore.

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The following are trademark applications pertinent to our field pending in the United States Patent office which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade-Mark Company, Barrister Building, Washington, D. C., trade-mark specialists.

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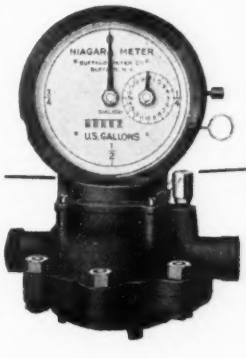

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Visiting Around the Refineries

By Paul Truesdell

National Petroleum News

GEORGE LOCKE, vice president of the Barnsdall Refining Co. in charge of sales believes that refiners everywhere should work for the adoption of daylight saving time. The more time the people have to play the more they will drive their cars, says Mr. Locke.

If there are 15,000,000 cars used for pleasure and each of them was driven an extra hour per day averaging 15 miles there would be somewhere in the neighborhood of 15,000,000 gallons of gasoline per day added to consumption.

Mr. Locke would have the daylight saving schedules made uniform over the nation, however, to get away from trouble in train schedules and so forth.

* * *

THE more or less experimental vapor phase cracking plant being built at the Gulf Refining Co.'s refinery at Bayonne is about ready to run, it is reported. The plant was built under an agreement the Gulf and The Texas Co. made as to patents they own on vapor phase cracking. Luis de Florez, refinery engineer, built the plant.

* * *

E. M. KEELY, superintendent of the Crew Levick refinery on Petty's Island, near Philadelphia, presided May 15 at a luncheon given the employes in honor of the 58th birthday of Henry L. Doherty, head of the Cities Service interests, including the Crew Levick Co. A tree was planted in honor of Mr. Doherty.

* * *

DR. A. J. EDWARDS, physician of El Dorado, Ark., sends in a description of a vapor phase cracking process which is said to be continuous in operation and involves the use of steam, fuller's earth and crushed limestone.

* * *

OPINIONS of experts differ as to the relative cost of cracking heavy oil and running crude to produce gasoline under certain market conditions. There is one side to the question that it seems likely is going to be an increasing factor and this is the quality of the fuel demanded by the motorist.

Gasoline of very good anti-knock quality is being insistently called for by more and more motorists, whether or not their cars actually require it, and new cars that do require it for pleasant operation are multiplying on the roads. It would seem that the refiner will either have to make more of his gasoline by cracking, either vapor or liquid phase, in order to get as high anti-knock value as possible into his fuel, or he will have to find some way to make a high anti-knock value fuel from crude by straight distillation (which now seems a remote possibility), or he will have to dope his straight run gasoline heavily to bring it to the required standard.

It looks like more and more work for the cracking plants, for it is doubtless cheaper to make a cracked gasoline and add to it say one cubic centimeter per gallon of Ethyl fluid than to make straight run and have to add to it three cubic centimeters of Ethyl fluid to bring it up to standard, Ethyl fluid costing one cent per cubic centimeter.

Of course the possibility is not to be overlooked that some refining method may be developed that will make gasoline of as high an anti-knock value as required and at a cost that will make it more economical than Ethyl gasoline. Perhaps such processes are at work now.

* * *

THIRTY-SIX refiners are now primary distributors of Ethyl gasoline. That is, they have mixing stations to blend gasoline with Ethyl fluid to bring it to the required anti-knock standard, and distribute it to their own stations or to jobbers or dealers for resale. The 36 distributing refiners are: American Oil Co., Baltimore; Ashland Refining Co., Ashland, Ky.; Associated Oil Co., San Francisco; Atlantic Refining Co., Philadelphia; Beacon Oil Co., Boston; Continental Oil Co., Denver; Crystal Oil Refining Corp., Shreveport; Empire Oil Works, Oil City, Pa.; Humble Oil & Refining Co., Houston; Johnson Oil Refining Co., Chicago; Kendall Refining Co., Bradford, Pa.; Liberty Oil Co., Ltd., New Orleans; Louisiana Oil Refining Corp., Shreveport; A. D. Miller's Sons Co., Pittsburgh; Pennsylvania Refining Co., Karns City, Pa.; Pennzoil Co., Oil City; Refiners Oil Co., Dayton, O.; Root Refineries Inc., El Dorado, Ark.; Spears & Riddle Co., Wheeling, W. Va.; Solar Refining Co., Lima, O.; Standard Oil Co. of Indiana, Chicago; Standard Oil Co. of Kentucky, Louisville; Standard Oil Co. of Nebraska, Omaha; Standard Oil Co. of New Jersey, New York City; Standard Oil Co. of Louisiana, Baton Rouge, La.; Standard Oil Co. of Ohio, Cleveland; Sterling Oil Co., Emlenton, Pa.; Texas Pacific Coal & Oil Co., Fort Worth, Tex.; Tide Water Oil Co., New York; Union Oil Co. of California, Los Angeles; Walburn Petroleum Co., Inc., New York; Waverly Oil Works Co., Pittsburgh; Mexican Petroleum Corp., New York; Pan American Petroleum Co., New York.

Canada—Imperial Oil Ltd., Toronto.

England—Anglo-American Oil Co., Ltd., London.

* * *

THE idea of standardizing refinery equipment is no new one to George H. Taber, vice president of the Gulf Refining Co. in charge of manufacturing. He began it as far as his own plant was concerned more than 40 years ago, he says. It was in 1885 when he became superintendent of the Eclipse Oil Works, at Franklin, now owned by the Atlantic Refining Co.

When he took charge the refinery possessed pumps of almost every make and variety that could be used in a refinery. The same was true of valves. He arrived at the conclusion that if the pumps and valves were all alike it would be much simpler to keep them in repair because the mechanics would understand them and also if they were all alike the parts would be interchangeable.

He worked gradually toward his idea of uniformity, buying units in accordance with the standard when new ones had to be installed. He says he has followed that principle as closely as possible ever since, keeping down refining costs by simplifying and standardizing equipment and making it as easy as possible for men to do their work safely and easily.

An Open Letter to Mr. G. O. Physics, And Family—

By Paul Wagner
N. P. N. STAFF WRITER

HOUSTON, May 25

Mr. G. O. Physics,
Somewhere in West Texas.

Dear Geo:

Since you strayed from the "straight and narrow" in the Gulf Coastal region of Texas and Louisiana a lot of people have been trying to find out what you are doing. Your friends, some of whom consider you on probation, have wanted to know of your successes elsewhere—if any.

Now that I've learned Geo is a scientific term for Earth, and not an abbreviation for George, there's been a question hanging in my mind, also. Is it possible you've been holding out on me about other things?

I tried to follow your fortunes in west Texas on a trip to the salt basin region and found traces of various members of your family among the shifting sand dunes there. But it seems you haven't been holding up to the reputation gained in the Gulf Coastal country; at least, I couldn't find a single discovery away from the region of saline plugs in south and east Texas for which you could take credit.

Is it possible you're trying to hide something? I don't think so, and I won't believe it until I have positive knowledge differently. Besides, I got a pretty definite check on your movements; even though I didn't quite catch up with you anywhere in that great wide-open petroleum amphitheatre where your boys have been going through the motions of acting as ushers.

Your work has always been something of a mystery to the layman, and, although I lay claim to owning one of the most complete technical libraries in the southwest, the genealogy of your family as contained in published literature is not altogether enlightening. Of course, anybody can learn from the dictionary that Geo, meaning earth, and Physics, the science of matter and motion, combine to represent the measure of such elements within the limits of interpretation of phenomena.

Too, one learns from various sources, such as the United States Bureau of Mines, the American Association of Petroleum Geologists and the American Institute of Mining & Metallurgical Engineers that—

the torsion balance member of your family, classified as gravimetric in character, measures two elements of earth deformation; namely, the rate of horizontal variation of intensity of gravity and a function of the curvature of the surface level;

that the seismograph measures sound travels along and below the surface of the earth, recording them photographically on a suitable instrument, depending on the density and elasticity of formations "shot through" for the velocity measures of waves; and,

that the magnetometer, long used in metal mining industries, works like a dip-needle on a principle of declination, in keeping with the pull of the earth's magnetic field.

These explanations explain, but they do not altogether enlighten. Perhaps they're all right for a doctor of philosophy, or a bachelor of Science, but what about their penetrating the densities of such garden varieties of oil men as the president of a company or the chairman of its board of directors? Don't you encounter a problem of deflection there?

I hear you saying, as you read: "Why bring that up?" All right, we'll let that pass. What we're interested in, anyhow, is the finding of structure hidden below the earth's surface that might serve for the accumulation of petroleum if source rocks and reservoirs are present.

"I'll admit structure is worth nothing without source rocks and reservoirs for accumulations. The geologists recognized that long ago. Therefore, they had to attempt a correlation of all such factors to reach conclusions about favorable or unfavorable territory. Your responsibility, and that of the various members of your family, ends with structure finding. But, generally, your work will be either in areas where source rocks and reservoirs may be reasonably presumed to exist; or, otherwise, you check back these exploratory problems to the geologists.

You'll overlook a lot of extraneous remarks I'm making here, I'm sure, for this letter is apt to fall into the hands of people who can't trace their relationship to the G. O. Physics family. Some of them may not know how successful you were in finding a dozen and a half, or so, submerged plugs in the Gulf Coastal and Interior salt dome regions of south and east Texas, to say nothing of a group of similar discoveries in southern Louisiana.

This will recognize again, publicly, your successes there; even if you did have trouble maintaining your torsion balance while trying to find methods of distinguishing caprock from gravel beds. I'm told you've had similar trouble in west Texas, although your Pecos county "high," near Girvin, which turned out to be "low," may have reflected an unusually thick deposit of anhydrite in

An earnest believer in the theory that the South Canadian river is a navigable stream, one of the roughnecks on the Gilcrease well drilling in the river bed in the Allen field (Oklahoma) is here pictured building a boat in which he proposes to trust his hide to the raging deep. It is rumored that the intrepid navigator is in training for the job of superintendent of navigation for the Gilcrease Oil Co.

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the sub-surface beds instead of gravel.

Assumptively, the anhydrite heavier than other minerals such as dolomite and limestone, the "needle" was attracted to the synclinal areas of its thickest deposition by the higher specific gravity. Then, salt and unconsolidated materials having still lighter specific gravities, I can understand how the problem of maintaining your torsion balance could become very embarrasing. Besides, George Sawtelle of Kirby Petroleum Co., tells me that in Pecos county at least the areas of greatest salt thickness indicate structural "lows." I suppose that, too, is something for you to take into account.

I'm told the Humphreys Corp., first mapped this biggest of all torsion balance "highs" in Pecos county, in H&TC block 2 and H&GN block 10, before Kirby-Humble drilled their two low wells of the Girvin area; also that a year later the Roxana Petroleum Corp. checked this same "high" and that one of its men frankly stated this arm of the Shell would have drilled it had it remained untested.

By the way, what can you tell me about the two failures of the Roxana, near Stiles, Reagan county, where the crest of a magnetometer "high" is said to have been moved on a recheck showing an error in interpretation of data after drilling the first hole; and where the second hole is reported showing a local thickening of salt? While checking up on that you may be able also to furnish the detail on the Humble's Parmer county test, drilled on a magnetometer "high" along the south flank of the Panhandle arch, which is said to have penetrated the thickest red bed section in that part of the state.

Of course, I know the seismograph is practically valueless in most hard rock areas where a repetition occurs of thin, hard beds. Naturally, this member of your family hasn't been expected to show any great form in parts of west Texas.

I know it's going to be embarrassing for you to explain the sweeping reductions made by the Gulf, Humble, Roxana, Amerada and other companies in geophysical forces in west Texas. I'm told that such instruments as these companies are leaving in the field are mainly for use in checking acreage submitted on geophysical evidence and to clean up detail around the more active leasing plays; that it really is of considerably greater value to attempt detail work maintaining one's torsion balance than trying to use instruments for reconnaissance. Incidentally, are the consulting geologists who are now using magnetometers in assembling and turning acreage blocks in west Texas making any headway?

I was very much interested in the leasing play the Phillips Petroleum Co. made after using three magneto-

meter outfits in the Sutton-Edwards county part of the Edwards Plateau region. Their two solidly leased blocks, I'm reliably told, were taken on the hope that the magnetometers had revealed buried granite "highs," along the flanks of which some granite wash may have accumulated to form a reservoir for oil from the black shale source rocks known to be of great local thickness just under the Edwards lime surface beds.

It's a gamble, of course, as to whether such reservoirs may be found present; but, then, should they be discovered, it's a fairly safe guess the Phillips people will have pretty much an entire oil field to themselves, in addition to making a fresh discovery of great geologic importance.

In closing, Geo, the industry is going to await with interest the development of data for removal of your work from the experimental stage in West Texas. Many cling to the hope that success may yet result from your efforts, which admittedly must stand or fall on better interpretation of data, among other things.

Until you prove yourself, I am,
With regards, but not respects,
Paul Wagner

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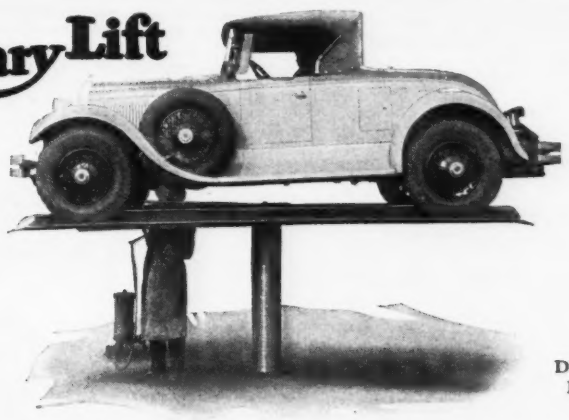
Barnum, Minn.—H. C. Hanson, filling station.

Rotary Lift



DRIVE-ON MODEL

Eliminates Service Adjustments

Rotary Lift is so constructed that the necessity for service or adjustments during the operation of the Lift have been eliminated. This is due to an exclusive method of construction found only in Rotary Lift.

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"Precision Meters for Petroleum Oils."
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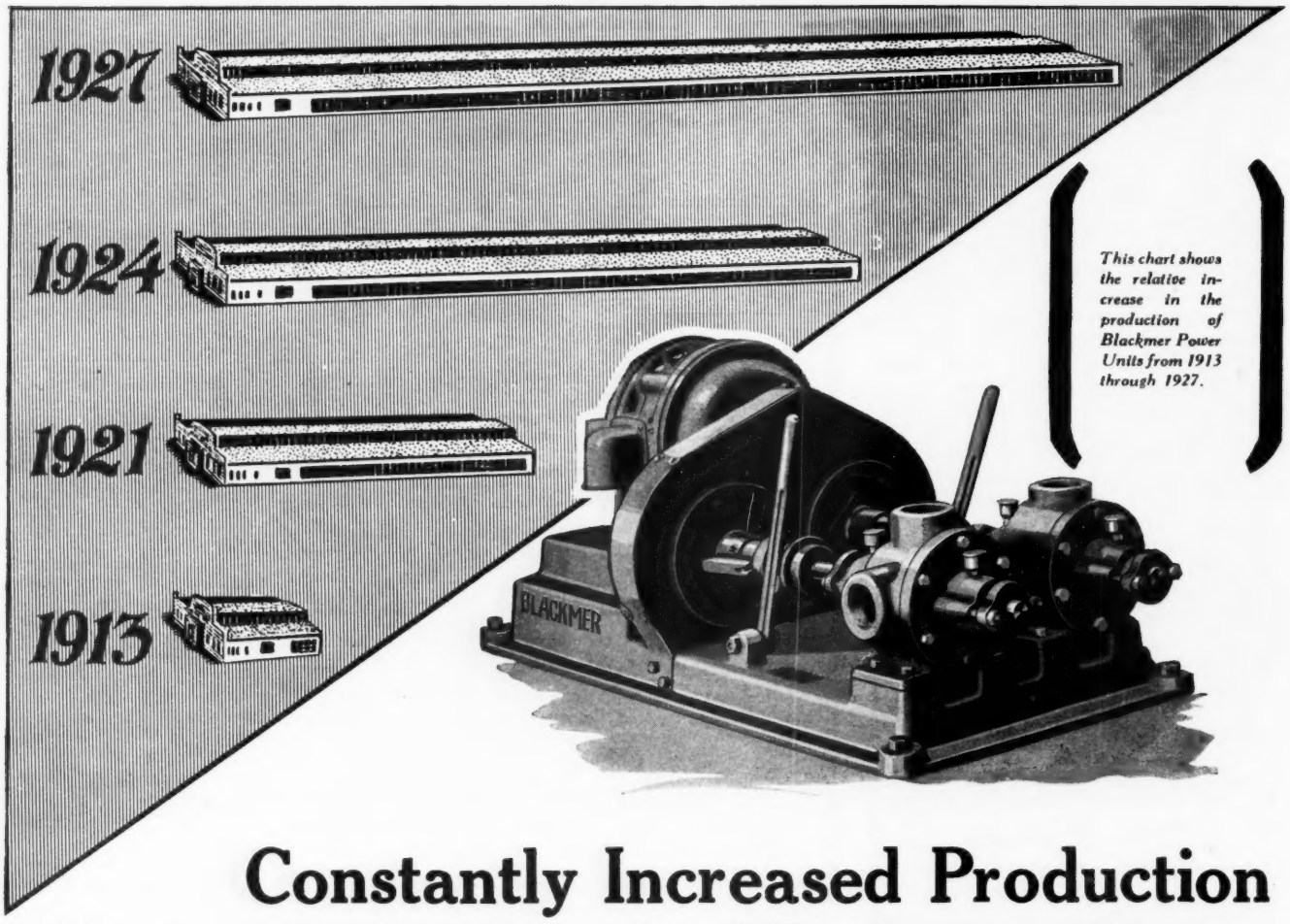
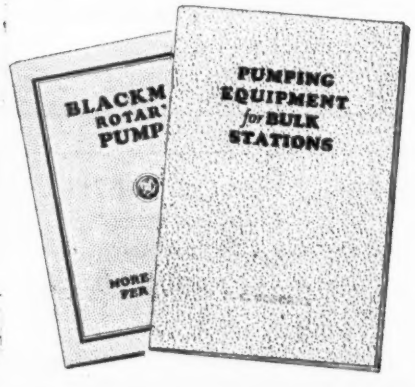


This chart shows the relative increase in the production of Blackmer Power Units from 1913 through 1927.

Constantly Increased Production Effects Reduction In Blackmer Prices

Ask for your copy of the new Blackmer Catalog which is now ready. It contains much information of value to those interested in pumps and hydraulics.

Get a copy of "Pumping Equipment for Bulk Stations." This booklet details the principles of proper bulk station hookups — pipe connections — length and size of suction and discharge lines—all those things that a man should know in order to construct a bulk station for efficient handling of large quantities of gasoline, kerosene and lube oils.



Now you can buy a standard Blackmer Rotary Pump with all of its desirable features at the price you'd expect to pay for a gear pump. You have always known that the Blackmer is the best, but perhaps the great difference in price has kept you from buying.

The chart above shows at a glance the increase in Blackmer power unit production during the years. Nothing spectacular — but it is this constant and steady increase coupled with the use of more modern equipment which has enabled us to make substantial savings in manufacturing costs. These savings are passed along to the buyer of our products.

Blackmer Pump Co.

1809 Century Ave.
Grand Rapids, Mich.

Offices in 20 principal cities

BLACKMER ROTARY PUMPS

ON THE LAZY BENCH

National Petroleum News

Rah: "What was the cause of that collision down at the corner today?"

Raw: "Two motorists after the same pedestrian."

—*Skelly News.*

* * *

"What was the idea of giving that poor hobo a stone when he asked for a crust of bread?"

"Oh, that was just to whet his appetite."

—*The Power Specialist.*

* * *

Dealer (rushing into the newspaper office): "See here, you've published an announcement of my death by mistake. That's got to be fixed."

Editor: "Well, we never contradict anything we have published, but I'll put you in the births column tomorrow and give you a fresh start."

—*Skelly News.*

* * *

Music Hath Charms

Director: Have you had a good musical education?

Applicant: You bet! Just give me the name of any song, any song at all, and I'll tell you like that what's on the other side of the record.

—*The Power Specialist.*

* * *

Farmer: "Thought you said you had plowed the ten-acre field."

Plowman: "No; I only said I was thinking about plowing it."

Farmer: "Oh, I see you've merely turned it over in your mind."

—*Skelly News.*

* * *

Unaccustomed As I Am To....

"How was the banquet?"

"Great! Two of the speakers got fishbones stuck in their throats and couldn't say a word."

—*The Power Specialist.*

* * *

"Nurse," said an amorous patient, "I'm in love with you. I don't want to get well."

"Cheer up, you won't," she assured him. "The doctor's in love with me, too, and he saw you kiss me this morning."

—*Skelly News.*

* * *

Grandma: "Isn't it wonderful how a single policeman can dam the flow of traffic?"

Little Grandson: "Yes, but you just ought to hear the truck drivers."

—*The Record.*

* * *

Convict (surveying day's rations in cell): Two pieces of raisin bread with three raisins in them, every Thursday. In three years and five months I'll have enough to start a batch of home brew.

—*Skelly News.*

* * *

"My Scotch boy friend sent me his picture."

"How does it look?"

"I don't know, I haven't had it developed yet."

—*Stanolind Record.*

* * *

No. 1—"Did you hear about the young lady being hurt in the explosion last night?"

No. 2—"No, how come?"

No. 1—"A smile lit up her face and the powder went off."

—*Stanolind Record.*

* * *

Customer: Are you sure this coonskin coat will be warm?

Salesman: Yes, sir. The fur in this coat came from coons that died of suffocation.

—*Stanolind Record.*

* * *

Angry Motorist—"Some of you pedestrians walk along just as if you owned the streets."

Irate Pedestrian—"Yes, and some of you motorists drive around just as if you owned the car."

—*Stanolind Record.*

* * *

He's so dumb he thinks a goblet is a small sailor.

—*Stanolind Record.*

* * *

"So you met Alice today."

"Yes. I hadn't seen her for ten years."

"Has she kept her girlish figure?"

"Kept it? She's doubled it."

—*Stanolind Record.*

* * *

Girl (in South): "I love the way boys talk down here."

Girl Friend: "Yes, it must be that Mason and Dixon 'line' you hear so much about."

—*Stanolind Record.*

* * *

"Is this a free translation?" asked a customer in a bookshop.

"No, sir," replied the clerk. "It will cost you $2."

—*Stanolind Record.*

* * *

Judge: What's this man charged with, officer.

Officer: Careless walkin', yer honor. He bumped into a truck and bent both fenders and the radiator.

—*Stanolind Record*

Reinforced Folio

362—A very compact folio, having three pockets. Made from the best grade smooth black cowhide. Stiffened bottom reinforced with metal studs. Case contains six 4-oz. bottles and five grease jars. Two inner cases may be carried.

Less 10% for Cash

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Builders of Sales Luggage

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That long time burning oil of SUPERIOR QUALITY.

39.5 to 40 gravity
265/70 Flash
300/05 Fire
25/30 Pour test
Prime White or better in color

KEROSENE

Full 45 Gravity
Full 46 Gravity
Water White color and uniform quality

These stocks are from that famous Pennsylvania crude and are what the name implies—SUPERIOR.

Write-Wire-Phone

Superior Oil Works
Warren, Penna.

INDEX TO ARTICLES

Selected Bibliography on Petroleum Technology

Editor's Note—The brief abstracts of current literature printed below are so arranged that they may be cut apart and mounted on 3" x 5" library indexing cards. The indexing numbers assigned bring the cards into logical sequence in the files. The "Decimal Index of Petroleum Technology" gives the key to the articles. This book is published exclusively by NATIONAL PETROLEUM NEWS as a service to its readers. Price $1.00. Abstracts started April 4, 1928.

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Important articles on all phases of petroleum developments will be summarized regularly in NATIONAL PETROLEUM NEWS as indicated on this page. This will include articles published by NATIONAL PETROLEUM NEWS; American Petroleum Institute; U. S. Bureau of Mines; U. S. Geological Survey; A. I. M. E., American Assn. of Petroleum Geologists, and other associations who publish important developments relating to oil.

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Truesdell, Paul **963.**

"One Bulk Station in the Country Replaces Two in Towns"

National Petroleum News, May 9, 1928, pp. 25-27.

Result is discussed of abandoning two bulk stations in medium-sized towns 8 miles apart and centering their business in one bulk station located half way between them. Truck hauls were shortened, overhead reduced and pay roll cut down by the change, as is shown in the article. Layout and construction of new station described. Station is that of the Cities Service Oil Co., near Cleveland.

Davison, G. C. **903.**

"Whether Refiners Make Money or Not, Depends Upon the Refiners"

National Petroleum News, May 9, 1928, pp. 60-64.

The author, head of the Tri-State Refining Co., Kenova, W. Va., states that the prosperity or the reverse of the refining industry lies in the hands of the refiners and cites steps that have been taken by the sugar and cotton industries to stabilize the market and "rationalize" production.

Mather, Kirtley F., Gilluly, James, and Lusk, Ralph G. **305.111.53**

"Geology and Oil and Gas Prospects of Northeastern Colorado"

U. S. Geological Survey Bulletin 796-B, 124 p., January, 1928.

The region described comprises that part of Colorado which lies east of the Rocky Mountain front range north of the latitude of Denver. It measures about 150 miles, east to west, and about 80 miles north to south. Included in the region are the eastern part of Larimer county, all of Weld, Morgan, Logan, Sedgwick and Phillips counties, and parts of Adams, Arapahoe, Washington and Yuma counties. Reference is made to commercial oil production in the small Boulder field and oil/gas accumulations on anticlines near Fort Collins. Suggestions for further field studies and prospecting are made. Copies may be had from the Superintendent of Documents, Government Printing Office, Washington, at 20 cents each.

Egloff, Gustav and Mekler, L. A. **732.4**

"New Types of Distillating Equipment Make Demands on Refractories"

National Petroleum News, May 9, 1928, pp. 76-80.

The severe load imposed on refractories by the modern high capacity pipe still and cracking unit is discussed by the authors and advice is given as to what kind of heat resisting materials should be employed in construction of such units to give the most satisfactory service under the hard conditions imposed. The authors are in the research laboratories of the Universal Oil Products Co., Chicago.

Thompson, S. A., and Eichelberger, O. H. **305.111.41**

"Vinton Salt Dome, Calcasieu Parish, La."

Bulletin of American Association of Petroleum Geologists, Vol. 12, No. 4, April, 1928, p. 385-394.

The producing area of this typical Gulf Coastal salt dome is described as small but prolific in its per acre yields. A mound with central depression at the surface identifies the field geologically. The salt core is a little less than a mile in diameter. Production is from basal Fleming and Oligocene beds. Cross-index under 333.

Chatfield, J. C. **772.7**

"Double Stabilizing Column Installed at New Roxana Plant in Logan County" Article 1

National Petroleum News, April 18, 1928, pp. 54-57.

Installation of a de Brey type double stabilizer at the natural gasoline plant of the Roxana is described, together with the operating method and the product made. Illustrated.

Meinzer, Oscar Edward **350.**

"Plants as Indicators of Ground Water"

U. S. G. S. Water Supply Paper 577, 1927, 95 p.

Although primarily a treatise giving results of studies of ground water conditions, as indicated by plant life, the paper is valuable to geologists for adapting similar data to industrial or mineral investigations. This paper may be obtained from the Superintendent of Documents, Government Printing Office, Washington, for 25 cents.

Plans Laid by A. P. I. to Organize Regional Traffic Committees

Staff Special
CHICAGO, May 26

PLANS are afoot to reorganize the general committee on railroad transportation of the American Petroleum Institute. In all probability it will not be made larger or smaller but its usefulness is going to be enhanced by the formation of four regional sub-committees, and D. V. Stroop is to be the new chairman.

The idea was suggested by W. R. Boyd, Jr., of the institute's staff, at the committee's meeting in Chicago May 15, and the members voted him authority to carry it out. There will be an eastern committee, a middle western committee, a southwestern committee and a Pacific coast committee.

Before making the suggestion Mr. Boyd explained that the general committee on transportation had once been the most active committee of the A.P.I., but that it was no longer so active. The situation was a great credit to the committee, he said. The committee has not grown inactive by reason of inertia but because it has been successful in working out most of the knotty problems assigned to it.

Having worked out its problems faster than new problems arose the committee's meetings have been called less frequently and dockets have grown gradually thinner. This had the direct result of attracting fewer committee members to meetings, and sometimes if a remote territory is not well represented those present are reluctant to act on a matter affecting that territory. Mr. Boyd's idea is to hold regional meetings more accessible to the several refining territories. Any member may attend any meeting but meetings naturally will be attended more generally by transportation men from nearby refineries. Matters of more local interest could be discussed at these meetings and propositions growing out of these discussions would come before the general committee in better form, backed by a wider opinion, he explained.

Twelve subjects were on the docket for the meeting in Chicago on May 15, of which three got most consideration. The matter of tank car calibration, the suggested uniform side track agreement, and the revision of Section 7, Rule 35 of the consolidated freight classification were the three live subjects.

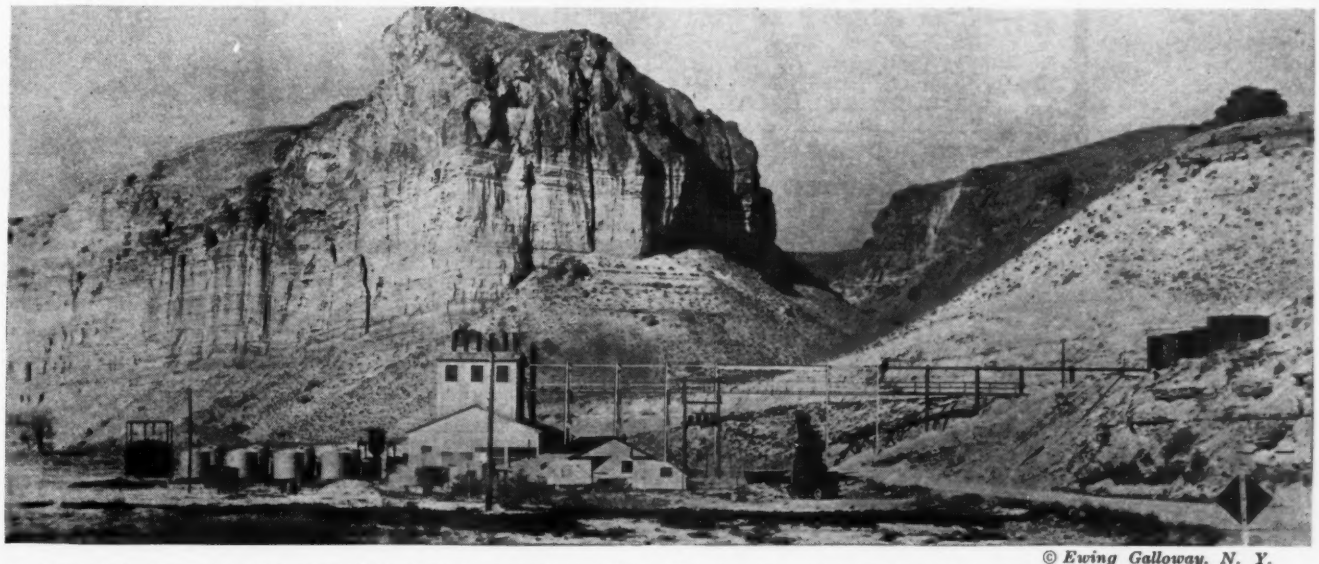
The committee is divided about calibration, some advocating water calibration and others computation from measurements. The water calibration group argue that their method is more accurate and profess to have exhibits to show that various agencies calibrating tank cars with water arrive consistently at about the same result in computing the capacity of the same car tank. Advocates of water calibration argued that agencies that figure capacities by measurement, do not come close together. Joseph W. Hayes of Mid-Continent Petroleum Corp., Tulsa, and A. E. Smith of Union Tank Car Co., Chicago, were the champions of the water calibration method.

The opposition was led by W. A. Frye, Sinclair Refining Co., who brought exhibits to show that his associates and others (working independently of one another) who have calibrated car tanks mathematically upon measurements taken with a steel tape, have consistently arrived at substantially the same results and that those results were close to the results obtained by water calibration. Mr. Frye's chief objection to the water calibration system was the expense of building a water calibration plant.

Reports of sub-committees representing both groups were submitted to D. V. Stroop of the A.P.I. staff. He will soon send a digest of their contents to each member. Both committees were retained and further research will be carried on.

The proposed uniform industrial side track agreement, in its present form, failed to meet the approval of the general committee. The committee voted to ask the committee of the American Railway Association to approve the rule with section 5 stricken out and with a few changes in other parts. Section 5 was a paragraph which gave the carrier right to use the industry's side tracks for general railroad purposes without charge or permission. One of the other paragraphs which the committee asked to have revised would (under its present form) make a refiner liable for any accident that might happen on his side track even if the railroad train crew was to blame.

W. H. Roe, Mid-Continent Petroleum Corp., chairman of the sub-



© Ewing Galloway, N. Y.

Oil from shale. Plant of the Wyoming Oil Products Co., near Green River, Wyoming, is a modern refinery for producing kerosene products from shale. One of the picturesque Green River buttes in the background

Every "Nu-Pro" Dealer Soon Realizes

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—that New Customers are easily obtained

—that both old and new customers are keenly appreciative of the Superior Service Rendered

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—is the color of Liquid Amber and Contains No Carbonizing Ingredients

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Write or Wire

Deepwater Oil Refineries, Inc.

Houston, Texas

committee on consolidated freight classification, reported Section 7 of rule 35 which prohibited a refiner from shipping gasoline or kerosene to any consignee unless he was known to have a suitable place to unload it in compliance with other railroad rules, had been changed.

A refiner now may ship gasoline or kerosene to a customer without knowing anything about what equipment he may have to handle it, but the carrier is relieved of the obligation to deliver it. Now the responsibility is on the railroad to find out whether a consignee can take care of the gasoline he buys in tank car lots, and if he has not enough equipment the road may refuse to deliver the shipment.

Another discussion arose over the proposed recommendation to revise estimated weights on petroleum products. At present railroads west of the Mississippi river assume a gallon of gasoline or kerosene to weigh 6.6 pounds and a gallon of heavy oil to weigh 7.4 pounds. Eastern railroads figure all products alike at 6.6 pounds to the gallon and freight charges are computed accordingly.

These arbitrary estimates of weight are old. They have been in use in railroad tariffs a long time. Certain refiners are of the opinion that the general run of gasoline is lighter now and that freight charges might be reduced by having the estimated weights changed. Other refiners, not situated the same, fear a general investigation would show fuels to be heavier now than they used to be and want to "leave well enough alone." The question was tabled.

Foreign Opportunities

Reserved information may be obtained from the Bureau of Foreign and Domestic Commerce, Washington, and its district and cooperative offices by duly registered firms and individuals upon written request by opportunity number. The Bureau does not furnish credit ratings or assume responsibility as to the standing of foreign inquirers; the usual precautions should be taken in all cases, and where no references are offered it does not necessarily imply that satisfactory references could not be given. Correspondence may be in English unless otherwise stated.

31081.—Machinery Oils, Hamburg, Germany, agency.

31153.—Lubricating oil and greases for automobiles and machinery, Quebec, Canada, agency and purchase.

31211.—Petrolatum and white oil, Prague, Czecho-Slovakia, agency.

31232.—Gasoline, kerosene, and lubricating oils, Damascus, Syria, agency.

31238.—Paraffin, and petrolatum, Dresden, Germany, purchase.

31239.—Lubricating oils and greases, Bombay, India, purchase and agency.

31240.—Emulsified asphalt for road building, Johannesburg, South Africa, sole agency.

31246.—Paraffin, Valparaiso, Chile, agency.

31264.—Paraffin in bars, Coburg, Germany, purchase.

31265.—Paraffin, Riga, Latvia, purchase.

31328.—Lubricating oils and greases, Rosario, Argentina, purchase.

"What's in a name?" "EVERYTHING", *answers the American Public - - -*

THE American public buys on faith and repeats on confidence.

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"Defiance" performance—based on years of experience in studying the practical requirements of the oil industry—is the explanation of the high regard in which "Defiance" Steel Barrels are held in the industry.

Our constant care is to see that this reputation is upheld through consistently maintaining the quality that has identified "Defiance" Steel Barrels with a high degree of value among buyers in the oil industry.

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Defiance, Ohio

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Refinery - Tank Wagon Markets

National Petroleum News

Fuel Oil from West Texas is Competing With Mid-Continent

MINOR price fluctuations were noted in the Mid-Continent gasoline markets in the week ended May 26. Gasolines were reported strong in all areas. Fuel oils were lower in price with nothing to indicate stronger prices in the immediate future. Kerosene fell off an eighth of a cent about the middle of the week. Gas oil and distillates were unchanged with a good demand for the former.

Neutral oils and cylinder stocks were in good shape at the close of the week with prices firm. Virtually no wax business was done, as most sellers were committed. The few quotations made ranged from 3.75 to 4 cents.

Only a few export inquiries were heard over the week and only one sale made. That was on 61-63, 390 e. p. gasoline. A sale of kerosene for export was reported but not confirmed. Friday there was a small export inquiry for cylinder oil to be shipped over June but the order was not placed, as the refiner's and exporter's price did not agree.

Natural gasolines experienced more fluctuations than other products and only a comparatively small amount of material moved during the week. Manufacturers claim there was virtually no market at all for the sour goods and only a limited number of orders for sweet material.

Fuel Oils

Fuel oil prices in Oklahoma and Texas were lowered from 2.50 to 5 cents per barrel the last of the week, following a general downward tendency in the market which had started early in the week. Reports were heard from West Texas of fuel oil moving as low as 50 cents per barrel. It was low gravity material and of high sulfur content but was of sufficient volume to make itself felt in North Texas and Oklahoma.

At the close of the week Texas 24-26 gravity and Oklahoma 14-16 and 16-18 gravity fuels were moving at 70 cents. These prices were being shaded, several buyers said, for resale and some material was moved in North Texas at 65 cents per barrel. No inquiries are being received for June. Kansas, Arkansas and Louisiana prices were not affected and a fair demand for the commodity was reported in Arkansas and Louisiana. Some stability is expected for the North Texas market, however, when railroads come in for their June requirements.

Gasolines

Aside from 58-60 U. S. Motor, which advanced slightly in Texas, Louisiana, Arkansas and Kansas, gasoline prices were virtually unchanged. Texas refiners boosted their price an eighth of a cent to 7.50 to 7.625 cents per gallon; Kansas price advanced from 7.625 to 7.75 cents and Arkansas refiners were holding at 8 cents flat at the close of the week. The demand for U. S. Motor was reported good in these areas and most Texas and Arkansas refiners are sold up for the next two weeks. In Louisiana there is no difficulty in moving material and all sellers are getting 8 cents.

Several Oklahoma refiners again advanced prices on U. S. Motor this week and the concensus of opinion was that no goods were available under 7.50 cents. More inquiries are being received for over June, but refiners are not making quotations. One export inquiry was in the market Friday for 500,000 gallons of U. S. Motor for over June, the exporter offering 7.625 cents. The sale had not been made Saturday.

Higher gravity gasolines in Oklahoma were steady and prices were generally unchanged. An export sale of 250,000 gallons of 61-63, 390 e. p. gasoline was reported at 7.75 cents.

Naphthas and low gravity gasolines also have advanced slightly, with a good demand reported and with goods comparatively scarce.

Kerosenes

Kerosenes passed an eventful week undergoing an advance of an eighth of a cent at the beginning only to drop off at the close. Several refiners early in the week raised their quotations to 5.50 cents for 41-43 w.w. grade. One refiner raised his quotation primarily to divert business to other channels, as he was sold up. Orders continued to come in at that figure, he said, and he was forced to go into the open market to cover, which he was able to do at 5.25 to 5.375 cents. Other refiners reported they were enjoying a good business at 5.50 cents.

Toward the middle of the week buyers found material was more freely offered and prices began to decrease somewhat. Thursday several refiners had lowered their price to 5.125 cents and some material moved at 5 cents flat to resale buyers. It was understood that an exporter was inquiring for 250,000 gallons of 41-43 w.w. grade about the middle of the week and that he was willing to pay 5.125 cents. As far as could be learned Saturday, the business had not been placed. Saturday the range was 5.125 to 5.375 cents, with buyers reporting material easily obtainable.

Distillate and Gas Oil

Prices which prevailed on these commodities the week before were still the market for the week ended May 26, distillate selling at 3 to 3.125 cents in Oklahoma and gas oil at 2.625 to 2.75 cents. Prices in other areas were also unchanged.

Various reports were heard on distillates in Oklahoma, several quarters reporting only a fair demand and some refiners saying they were putting all their distillate in storage, while one or two raised quotations during the week to 3.25 cents, reporting a good demand. The bulk of material which moved was at 3 to 3.125 cents.

Gas oil was in good shape throughout the Mid-Continent, with prices holding firm. A seller in Oklahoma who was forced to cover on some material he had sold early in the month, said he had a hard time finding goods at 2.50 cents for resale.

Neutral Oils, Cylinder Stocks, Wax

Neutral oils and cylinder stocks were unchanged over the week. Refiners enjoyed a good business for spot shipment material and contract

Refinery Markets on LightOils and Lubricants

Prices given below are in cents per gallon, F. O. B. refinery, except where $ is shown

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

GASOLINE AND NAPHTHA

PENNSYLVANIA	Prices May 28	Prices May 21	Prices May 14
52-54 Naphtha	9.75 –10.00	9.50 – 9.75	8.75 – 9.625
54-56 Naphtha	9.75 –10.25	9.75 –10.00	9.00 – 9.75
58-60 U.S. Motor 437 e.p.	10.00 –10.50	10.00 –10.25	9.75 –10.25
60-62 400-410 e.p. gasoline	10.50 –11.00	10.25 –11.00	10.25 –11.00
64-66 390 e.p. gasoline	10.875–11.50	10.875–11.50	10.50 –11.50
68-70 Str.-run gas. 350-360 e.p.	11.50 –12.75	11.875–12.75	11.50 –12.50
OKLAHOMA			
48-50 450 e.p. naphtha	†7.125– 7.25	†7.00 – 7.125	†7.00
50-52 450 e.p. naphtha	†7.125– 7.25	†7.00 – 7.125	†7.00
56-58 450 e.p. gasoline	7.125– 7.25	7.125– 7.25	6.875– 7.00
58-60 450 e.p. gasoline	7.25	7.25	7.00
64-66 390 e.p. gasoline	7.625– 7.75	7.625	7.50 – 7.625
68-70 350-360 e.p. gasoline	8.125– 8.25	8.00 – 8.125	7.75 – 7.875
OKLAHOMA (Weighted Average Prices)			
58-60 U.S. Motor, 437 e.p.	7.5332	7.5090	7.3000
60-62 437 e.p. gasoline	7.5893	7.6250	7.2963
60-62 400 e.p. gasoline	7.7500	7.5500	7.5000
64-66 375 e.p. gasoline	7.8750	7.8750	7.8125

Above are weighted average prices, current week's prices being effective on Saturday, instead of Monday, the last day on which weighted averages are available for publication in this table. Weighted average prices for the current Monday are published on page 37 of this issue. The two previous week's prices shown are corrected to show Monday's prices, effective on the dates shown at the top of the columns.

KANSAS* (F. O. B. refinery Kansas destination)			
58-60 U.S. Motor 437 e.p.	7.75	7.625	7.25 – 7.50
60-62 400 e.p. gasoline	7.875	7.75	7.625– 7.75
64-66 375 e.p. gasoline	8.00	7.875	7.75 – 7.875
NORTH TEXAS			
48-52 450 e.p. naphtha	†7.125– 7.25	†7.00	†6.875
56-58 450 e.p. gasoline	†7.25	†7.00 – 7.125	†6.75 – 6.875
58-60 450 e.p. gasoline	†7.25	7.125	†6.875– 7.00
58-60 U.S. Motor 437 e.p.	7.50 – 7.625	7.50	7.375– 7.50
60-62 400 e.p. gasoline	7.625– 7.75	7.625	7.50
64-66 390 e.p. gasoline	7.875	7.75	7.50 – 7.625
64-66 375 e.p. gasoline	8.00	8.00	7.625– 7.75
68-70 350-360 e.p. gasoline	8.25	8.00 – 8.125	7.75
NORTH LOUISIANA (N. La., Ark. and Miss. destination)			
58-60 U.S. Motor gasoline	8.00	7.75	7.50 – 7.625
ARKANSAS (Arkansas destination only)			
56-58 450 e.p. gasoline	7.50	6.875	6.875
58-60 450 e.p. gasoline	7.50 – 7.625	7.25	7.25
58-60 U.S. Motor 437 e.p.	8.00	7.75 – 8.00	7.625– 7.75
‡CALIFORNIA			
54-58 U.S. Motor 437 e.p.	8.25 –12.50	9.00 –12.50	9.00 –12.50
58-60 U.S. Motor 437 e.p.	10.00 –13.00	10.00 –13.00	10.00 –13.00
42-45 Eng. dis. 445-480 e.p.	6.50 – 7.00	6.50 – 7.00	6.50 – 7.00

‡3c tax to be added to California gasoline prices if used in state.

NATURAL GASOLINE

(Note: End point of all grades, not over 375 F. Since Oct. 1, 1927 naturals must pass corrosion test.)

OKLAHOMA			
Grade AA, 80-87.9, 90% Recovery	†5.375– 6.00	†5.75 – 6.50	†6.00 – 6.50
Grade A, 72-79.9, 90% Recovery	†5.375– 6.00	†5.75 – 6.50	†6.00 – 6.50
Grade BB, 84-92, 85% Recovery	†5.25 – 5.50	†5.25 – 5.75	†5.25 – 5.625
Grade B, 76-83.9, 85% Recovery	†5.25 – 5.50	†5.25 – 5.75	†5.25 – 5.625
Grade C, 80-92, 78% Recovery	†5.125– 5.25	†5.25 – 5.50	†5.25 – 5.50
NORTH TEXAS (F. O. B. Breckenridge)			
Grade AA, 80-87.9, 90% Recovery	†5.375– 6.00	†5.875– 6.50	†6.125– 6.50
Grade A, 72-79.9, 90% Recovery	†5.375– 6.00	†5.875– 6.50	†6.125– 6.50
Grade BB, 84-92, 85% Recovery	†5.25 – 5.50	†5.375– 5.75	†5.375– 5.625
Grade B, 76-83.9, 85% Recovery	†5.25 – 5.50	†5.375– 5.75	†5.375– 5.625
Grade C, 80-92 78% Recovery	†5.125– 5.25	†5.25 – 5.50	†5.25 – 5.50
NORTH LOUISIANA (F. O. B. Monroe District)			
Grade AA	†5.75 – 6.25	†6.50 – 6.75	†6.50 – 6.75
Grade BB	†5.50 – 5.75	†5.75 – 6.00	†5.75 – 6.00
Grade C	†5.25 – 5.50	†5.50 – 5.75	†5.50 – 5.75
CALIFORNIA			
75-85, 375-390 e.p. blend	8.00 – 8.50	8.50 – 9.00	8.50 – 9.00

MOTOR FUEL BLENDS

OKLAHOMA			
64-66 Blend 437 e.p.	†7.25	†7.25	†7.00 – 7.25

BURNING OILS

PENNSYLVANIA			
45 w.w. kerosene	6.75 – 7.25	6.75 – 7.25	6.75 – 7.125
46 w.w. kerosene	7.25 – 7.75	7.25 – 7.75	7.25 – 7.75
47 w.w. kerosene	7.50 – 8.00	7.50 – 8.00	7.50 – 8.00
300 mineral seal	7.50 – 7.75	7.50 – 7.75	7.50 – 7.75
OKLAHOMA			
41-43 w.w. kerosene	5.125– 5.375	5.25 – 5.50	5.25 – 5.375
42-44 w.w. kerosene	5.75	5.75 – 5.875	5.75
KANSAS (F. O. B. refinery Kansas destination)			
41-43 w.w. kerosene	5.50 – 5.75	5.50 – 5.75	5.50 – 5.75
42-44 w.w. kerosene	6.00	6.00	6.00
NORTH TEXAS			
40-42 w.w. kerosene	†4.75 – 4.875	†4.875	†4.875
41-43 w.w. kerosene	†5.25	†5.25	†5.25
NORTH LOUISIANA (N. La. Ark. and Miss. destination)			
41-43 w.w. kerosene	5.75	5.75	5.75
ARKANSAS (Arkansas destination only)			
42-44 kerosene	5.875– 6.00	5.875– 6.00	5.75 – 6.00
CALIFORNIA			
38-40 w.w. kerosene	5.00 – 5.50	5.00 – 5.50	5.00 – 5.50

NEUTRAL OIL

PENNSYLVANIA Vis.		(Viscosity at 70°F.)	
200 No. 3 Assoc. Filt.	33.50 –35.00	33.50 –35.00	33.50 –35.00
180 No. 3 Assoc. Filt.	31.50 –33.00	31.50 –33.00	31.50 –33.00
150 No. 3 Assoc. Filt.	27.50 –29.00	27.25 –29.00	27.50 –29.00
	(Non Viscous)		
34 Grav. 330-340 Flash	7.75 – 9.00	7.75 – 9.00	7.75 – 9.00
36 Min. Neut. 300-305 Flash	6.75 – 8.50	6.50 – 8.50	6.50 – 8.50
****OKLAHOMA** Vis. Color	(Viscosity at 100°F.)		
100—No. 2	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50
150—No. 3	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
150—No. 4	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
180—No. 3	9.00 –10.00	9.00 –10.00	9.00 –10.00
180—No. 4	9.50 – 9.75	9.50 – 9.75	9.50 – 9.75
180—No. 5	9.25 – 9.75	9.25 – 9.75	9.25 – 9.75
200—No. 3	9.625–11.00	9.625–11.00	9.625–11.00
200—No. 4	9.50 –10.75	9.50 –10.75	9.50 –10.75
200—No. 5	9.00 –10.50	9.00 –10.50	9.00 –10.50
220—No. 3	12.50 –13.50	12.50 –13.50	12.50 –13.50
220—No. 4	12.25 –12.50	12.25 –12.50	12.25 –12.50
220—No. 5	11.50 –12.00	11.50 –12.00	11.50 –12.00
240—No. 3	13.50 –14.00	13.50 –14.00	13.50 –14.00
240—No. 4	13.25 –13.50	13.25 –13.50	13.25 –13.50
240—No. 5	12.00 –13.00	12.00 –13.00	12.00 –13.00
280—No. 3	15.50 –16.50	15.50 –16.50	15.50 –16.50
280—No. 4	15.25	15.25	15.25
280—No. 5	14.00 –15.00	14.00 –15.00	14.00 –15.00
300—No. 5-6	17.00	17.00	17.00
GULF COASTAL Vis. Color	(Viscosity at 100°F., pour test 0)		
100—No. 2 Unfilt. Pale	7.00 – 7.50	7.00 – 7.50	7.00 – 7.50
200—No. 3 Unfilt. Pale	9.50 –10.25	9.50 –10.25	9.50 –10.25
300—No. 3 Unfilt. Pale	10.50 –11.25	10.50 –11.25	10.50 –11.25
500—No. 3½ Unfilt. Pale	12.50 –13.25	12.50 –13.25	12.50 –13.25
750—No. 4 Unfilt. Pale	14.50 –15.50	14.50 –15.50	14.50 –15.50
200—No. 5½ Red Oil	7.50 – 8.25	7.50 – 8.25	7.50 – 8.25
300—No. 5½ Red Oil	8.75 – 9.25	8.75 – 9.25	8.75 – 9.25
500—No. 6 Red Oil	10.00 –10.50	10.00 –10.50	10.00 –10.50
750—No. 6 Red Oil	12.75 –13.50	12.75 –13.50	12.75 –13.50
CALIFORNIA Vis. Color	(Viscosity at 100°F.)		
100—No. 3	9.50 –10.00	9.50 –10.00	9.50 –10.00
200—No. 3	11.50 –12.00	11.50 –12.00	11.50 –12.00
300—No. 3	13.00 –13.50	13.00 –13.50	13.00 –13.50
450—No. 3	15.50 –16.00	15.50 –16.00	15.50 –16.00
550—No. 3	16.50 –17.00	16.50 –17.00	16.50 –17.00
600—No. 3	17.00 –17.50	17.00 –17.50	17.00 –17.50
200—No. 5	11.00 –11.50	11.00 –11.50	11.00 –11.50
300—No. 5	12.00 –12.50	12.00 –12.50	12.00 –12.50
400—No. 5	14.00 –14.50	14.00 –14.50	14.00 –14.50
500—No. 5	15.00 –15.50	15.00 –15.50	15.00 –15.50
600—No. 5	16.00 –16.50	16.00 –16.50	16.00 –16.50
700—No. 7	18.00 –18.50	18.00 –18.50	18.00 –18.50

CYLINDER STOCKS

****OKLAHOMA**			
190-200 Vis. at 210° Brt. St.	31.00 –32.00	31.00 –32.00	31.00 –32.00
150-160 Vis. at 210° Brt. St.	21.50 –24.00	21.50 –24.00	21.50 –24.00
600 E St. 140-150 Vis.-210°	17.00 –18.00	17.00 –18.00	17.00 –18.00
600 St. Ref. Olive Green	8.50 –10.00	8.50 –10.00	8.50 –10.00
600 St. Ref. Dark Green	6.00 – 8.00	6.00 – 8.00	6.00 – 8.00
Black Oil	5.00	5.00	5.00
PENNSYLVANIA	(1-inch Immersion Test)		
600 Steam Refined	10.25 –11.75	9.75 –11.50	9.75 –11.50
650 Steam Refined	12.50 –15.00	11.50 –15.00	11.75 –15.00
600 Flash	17.00 –20.00	16.00 –20.00	16.00 –20.00
625 Flash	26.00 –29.00	26.00 –29.00	25.00 –29.00
600 Warren E	16.00 –17.50	16.00 –17.50	16.00 –17.50
600 Oil City E	15.50 –17.00	15.00 –17.00	16.00 –17.00
600 D Filtered	22.00 –26.00	23.00 –25.50	23.00 –25.50
Cold Test Stock, 40-50 p. p., 140-150 vis. at 210° 540-550 flash, No. 8 color	31.00	29.50 –31.00	29.00 –31.00
40-50 p.p., 140-150 vis. at 210°, 540-550 flash, No. 6-6½ color diluted	29.00	27.50 –29.00	27.00 –28.00

(Note—Prices of total immersion test goods average 1 to 3 cents per gallon higher)

†PRICES NOMINAL ††ONLY ONE REFINER QUOTING *QUOTATIONS ONLY **REPRESENTS BOTH SALES AND QUOTATIONS

GULF Refining Company

General Sales Offices
PITTSBURGH, PA.

District Sales Offices
New York Boston Philadelphia Louisville
Houston New Orleans Atlanta Tampa

REFINERS OF OKLAHOMA, TEXAS AND LOUISIANA

PETROLEUM

Refined Oil Naphtha Paraffine Wax
Gasoline Gas Oils Petroleum Coke

FUEL OILS

LUBRICATING OILS

Cylinder Engine Cordage

RED AND PALE PARAFFINE OILS

A LUMBER WAGON AND A ROLLS-ROYCE

Are somewhat different and yet alike, inasmuch as they both have four wheels. The same holds true in the difference between the requirements of a gasoline tank of the old fashioned wagon delivery and the modern bus chassis. Brown Certified Tanks are custom built for the particular chassis for which they are intended. We are specialists in this line and ask that you let us figure on your requirements.

BROWN Certified TANK

Speed with Safety

BROWN SHEET IRON & STEEL CO.

964 Berry Ave. **St. Paul, Minn.**

DON'T DELAY—SIGN THE COUPON AND LET US KNOW WHAT YOU WILL NEED.

Check Items on which you want prices.

Complete Bulk Station..... Number of Tanks..... Size.....

Filling Station Tanks..... Size..... Pumps.....

Truck Tanks..... Size..... Compts.....

Other Equipment.....

Name..... Address.....

Refinery Markets on Wax and Heavy Oil Products

Prices given below are in cents per gallon, F. O. B. refinery, except where $ is shown

(For quick reference to Refinery Prices, get the OIL PRICE HANDBOOK, published annually)

WAX

PENNSYLVANIA	Prices May 28	Prices May 21	Prices May 14
[*Per Pound, New York			
122-124 white crude scale	4.00 – 4.25	4.00 – 4.25	3.875– 4.25
124-126 white crude scale	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25
**OKLAHOMA			
*124-126 White Crude Scale	3.75 – 4.00	3.75 – 3.875	3.75
CALIFORNIA			
White crude scale, per pound, ton lots	6.00 – 6.50	6.00 – 6.50	6.00 – 6.50

FUEL OIL

PENNSYLVANIA			
36-40 fuel oil	5.00 – 5.50	5.00 – 5.50	5.125– 5.50
30-34 fuel oil	5.00 – 5.125	5.00 – 5.125	5.00 – 5.125
28-32 fuel oil	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00
OKLAHOMA			
38-40 straw distillate	3.00 – 3.125	3.00 – 3.125	3.00 – 3.125
36-38 straw distillate	3.00	3.00	3.00
32-36 gas oil, straw	†2.625– 2.75	†2.625– 2.75	†2.625– 2.75
32-36 dark gas oil	2.625	2.625	2.625
28-30 fuel oil (in bbls.)	$0.90 – 0.95	$0.90 – 0.975	$0.90 – 0.975
26-28 fuel oil (in bbls.)	$0.85 – 0.875	$0.85 – 0.90	$0.85 – 0.90
24-26 fuel oil (in bbls.)	**$0.75– 0.775	**$0.75– 0.80	**$0.75– 0.80
22-26 fuel oil (in bbls.)	**$0.75	**$0.75– 0.775	**$0.75– 0.775
18-22 fuel oil (in bbls.)	**$0.70– 0.725	**$0.725	**$0.725
16-18 fuel oil (in bbls.)	**$0.70	**$0.70– 0.725	**$0.70– 0.725
14-16 fuel oil (in bbls.)	**$0.70	**$0.70– 0.725	**$0.70 –0.725

Note: Zero cold test low flash gas oils sell for ¼ cent more per gallon. Zero cold test fuel oils sell for 5 to 10 cents more per bbl.

KANSAS* (F. O. B. refinery Kansas destination.)			
38-40 straw distillate	3.25 – 3.50	3.25 – 3.50	3.25 – 3.50
36-38 straw distillate	3.00	3.00	3.00
32-36 gas oil	2.875	2.875	2.875
24-26 fuel oil	*$0.90	*$0.90 – 0.95	*$0.90 – 0.95
18-22 fuel oil	*$0.75– 0.80	*$0.80	*$0.80
NORTH TEXAS			
38-40 straw distillate	2.875– 3.00	3.00	3.00
32-36 gas oil, cracked	2.375– 2.50	2.50	2.50
32-36 gas oil, uncracked	2.375– 2.50	2.50	2.50
24-26 fuel oil (in bbls.)	$0.70	$0.725– 0.75	$0.725– 0.775

GULF COASTAL	Prices May 28	Prices May 21	Prices May 14
Fuel (in bbls.)	$1.30 –$1.35	$1.30 – 1.35	$1.40 –$1.50
Gas oil	4.25 – 4.375	4.25 – 4.375	4.375– 4.50
NORTH LOUISIANA (N. La., Ark. and Miss. destination)			
32-36 gas oil, dark	2.625– 2.875	2.625– 2.875	2.625– 2.75
32-36 gas oil, straw	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00
16-20 fuel oil (in bbls.)	$0.85	$0.85	$0.85
ARKANSAS (Arkansas destination only)			
32-36 gas oil, straw	3.00 – 3.25	3.00 – 3.25	3.00 – 3.25
32-36 gas oil	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00
28-32 gas oil	2.75	2.75	2.75
Road Oil	$1.15	$1.15	$1.15
CALIFORNIA* (F. O. B. San Joaquin Valley. At San Francisco, 4c per bbl. more)			
14-18 fuel oil (in bbls.)	$0.70 –$0.85	$0.70 –$0.85	$0.70 –$0.85
14-18 Bunker oil (in bbls.)	$0.80 –$1.00	$0.80 –$1.00	$0.80 –$1.00
30-34 gas oil (in bbls.)	$0.95 –$1.10	$0.95 –$1.00	$0.95 –$1.10
27 Plus Diesel oil (in bbls.)	$0.90 –$1.00	$0.90 –$1.00	$0.90 –$1.00

PETROLATUMS

PENNSYLVANIA (In barrels, carload lots, f.o.b. refinery. ½c to ¾c per pound less.)			In tank cars
Snow White	8.00 – 8.25	8.00 – 8.25	8.00 – 8.125
Lily White	7.00 – 7.25	7.00 – 7.25	7.00 – 7.125
Cream White	6.00 – 6.25	6.00 – 6.25	6.00
Blonde	‡	‡	‡
Light Amber	3.00 – 3.25	3.00 – 3.25	3.00 – 3.25
Amber	3.00	3.00	3.00
Red	2.75	2.75	2.75
Green No. 5 color	‡	‡	‡

‡No refiner quoting.

**PETROLEUM COKE

OKLAHOMA

(Per ton in car lots)

Lump	$4.50 – 5.00	$4.50 – 5.00	$4.50 –$5.00
Still run	$2.75 – 3.00	$2.75 – 3.00	$2.75 –$3.00
Breeze	$1.75 –$2.00	$1.75 – 2.00	$1.75 –$2.00

†PRICES NOMINAL ††ONLY ONE REFINER QUOTING *QUOTATIONS ONLY **REPRESENTS BOTH SALES AND QUOTATIONS

goods moved out in good shape.

Wax continues to be a scarce commodity. One or two refiners who have a small amount of goods were quoting from 3.75 to 4 cents.

Natural Gasolines

There were greater fluctuations in the natural gasoline market during the week than in any other commodity manufacturers saying that demand was slow for all grades. Grade AA, sour, was selling at 5.75 cents at the beginning of the week, with the sweet goods of the same grade moving as high as 6.50 cents, some of it moving an eighth to a quarter cent lower. Grades B and BB were at 5.25 cents to 5.75, the lower price being the untreated material and the higher the sweet goods, with grade C at 5.25 to 5.50 cents. Sour material of all grades was being more freely offered as the week ended and at lower prices. Sour grade AA was moving at 5.375 cents on Saturday and there were reports of material available under that figure. Sweet goods moved at 6 cents although the movement was thin.

The most stable natural gasolines were Grades B and BB, which were forced down by the lower prices on AA.

Penna. Steam Refined Stock Activity Increases

CLEVELAND, May 26.—Spot demand for western Pennsylvania goods continued good this week. Steam refined stocks were active, with quotations advanced .25 to .50 cents a gallon. Viscous neutrals were in good demand. Wax continued scarce. Several refiners reported being oversold on gasoline. Kerosene demand has declined somewhat.

U. S. Motor gasoline for spot shipment was 10 to 10.25 cents. One refiner was quoting 10.50 cents over June. A broker quoted this price on a limited quantity over first week of month. More refiners reported buyers were entering spot gasoline market to augment purchases made for over the month delivery.

Bright stocks for June were quoted at top of market price range. Some goods was available for spot shipment at slightly lower prices.

The current month's business continued to exceed that for a corresponding period last year. One refiner estimated he was doing 15 per cent larger volume.

TULSA, May 26.—Willis C. Brown, president, and C. C. Herndon, vice-president of the Sparton Aircraft Corp., of Tulsa, have gone to Europe for a seven or eight weeks tour of the principal aviation centers. A visit will be made to the factory where the Siemens-Halske engines are made. This is the motor that is being used in the Spartan ships. Mr. Herndon is also vice-president of the Skelly Oil Corp., whose executives are closely affiliated with the Sparton company. William G. Skelly is chairman of the board of the airplane company.

Week's Price Changes Tank Wagon Markets

Gasoline Changes

Standard of Indiana—T.w. and s.s. prices gasoline advanced 1.2 cents. Minneapolis, to 17.2 cents and 19.2 cents respectively, including 2 cent state tax, **May 16.**

Continental Oil—T.w. and s.s. prices gasoline advanced 1 cent, Wyoming and Utah, **May 26.**

* * *

Kerosene Changes

Standard of New York—T.w. price kerosene advanced 1 cent Buffalo, 3 cents Rochester, both to 15 cents, **May 18.**

Standard of Kentucky—T.w. and s.s. prices gasoline reduced 1 cent, Lexington, to 19 cents and 21 cents respectively, including 5 cent state tax, **May 26.**

Tank Wagon, Service Station Markets for Gasoline and Kerosene

(OIL PRICE HANDBOOK has t.w. and s.s. markets for 1927, 1926, 1925, 1924 arranged for quick reference)

These Prices in Effect May 28, 1928, as Posted by Principal Marketing Companies

S.O. NEW JERSEY TERRITORY

	Gasoline T.W.	Tax	Gasoline Total T.W.	Gasoline S.S.	Oil T.W.
Atlantic City, N. J.	16	2	18	20	14
Newark, N. J.	16	2	18	20	14
Annapolis, Md.	16	4	20	23	14
Baltimore, Md.	16	4	20	23	12
Cumberland, Md.	16	4	20	23	14
Washington, D. C.	16	2	18	21	14
Danville, Va.	16	5	21	*	14
Norfolk, Va.	16	5	21	24	14
Richmond, Va.	16	5	21	24	14
Roanoke, Va.	16	5	21	24	14
Petersburg, Va.	16	5	21	24	14
Charleston, W. Va.	16	4	20	23	14
Keyser, W. Va.	16	4	20	23	14
Parkersburg, W. Va.	16	4	20	23	14
Wheeling, W. Va.	16	4	20	23	14
Charlotte, N. C.	16	4	20	23	14
Hickory, N. C.	16	4	20	23	14
Mt. Airy, N. C.	16	4	20	23	14
Salisbury, N. C.	16	4	20	23	14
Charleston, S. C.	15	5	20	23	14
Columbia, S. C.	15	5	20	23	14

*Dealers set own prices. S. O. New Jersey does not operate station.

S. O. NEW YORK

Due to local price conditions at many points in S. O. New York territory, actual prices on both gasoline and kerosene are being made at under the posted tank wagon prices published below.

New York City	17	0	17	*19	15
Albany, N. Y.	17	0	17	20	15
Buffalo, N. Y.	17	0	17	20	15
Rochester, N. Y.	17	0	17	20	15
Syracuse, N. Y.	17	0	17	20	15
Boston, Mass.	17	0	17	19	15
Augusta, Me.	17	4	21	23	15
Manchester, N. H.	17	4	21	23	15
Burlington, Vt.	15	3	18	22	15

*The Standard of New York does not operate stations in New York City. This figure is the retail price of a principal station operator selling Socony gasoline.

ATLANTIC REFINING

Pittsburgh, Pa.	16	*	16	*21	13
Philadelphia, Pa.	16	*	16	*21	13
Allentown, Pa.	16	*	16	*21	13
Erie, Pa.	16	*	16	*21	13
Scranton, Pa.	16	*	16	*21	13
Altoona, Pa.	16	*	16	*21	13
Dover, Del.	16	3	19	21	14
Wilmington, Del.	16	3	19	21	14
Providence, R. I.	19	2	21	21	15
Boston, Mass.	19	0	19	19	15
Springfield, Mass.	19	0	19	19	15
Worcester, Mass.	19	0	19	19	15
Hartford, Conn.	19	2	21	21	14
New Haven, Conn.	19	2	21	21	15

*3-cent state tax is collected by retail dealer and paid by him directly to state.

S. O. KENTUCKY

Lexington, Ky.	14	5	19	21	15.5
Louisville, Ky.	14	5	19	21	15
Covington, Ky.	15	5	20	22	15.5
Clarksdale, Miss.	15	4	19	21	14.5
Gulfport, Miss.	††16.5	4	††20.5	22.5	14
Jackson, Miss.	15	4	19	21	14.5
Natchez, Miss.	14.5	4	18.5	20.5	14
Vicksburg, Miss.	14.5	4	18.5	20.5	14
Birmingham, Ala.	17	4	21	23	16
Mobile, Ala.	17	4	21	23	15
Montgomery, Ala.*	18	4	22	24	16.5
Atlanta, Ga.	17	4	21	23	†16.5
Augusta, Ga.	17	4	21	23	†16.5
Macon, Ga.	17	4	21	23	†16.5
Savannah, Ga.	15	4	19	20	14.5
Jacksonville, Fla.	15	5	20	22	13.5
Miami, Fla.	17	5	22	24	15.5
Tampa, Fla.	15	5	20	22	13.5
Pensacola, Fla.	**16	5	**21	23	13.5

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosene at Montgomery included. Mobile gasoline prices include 1c city tax.
†Georgia kerosene prices include 1c state tax.
**Both tank wagon prices include 1c city tax at Pensacola, which went into effect Oct. 15, 1926.
††Both tank wagon prices at Gulfport include Harrison county privilege tax of 2c.

S. O. INDIANA

	Gasoline T.W.	Tax	Gasoline Total T.W.	Gasoline S.S.	Oil T.W.
Chicago, Ill.	14	0	14	16	12
Decatur, Ill.	14.2	0	14.2	16.2	12.1
E. St. Louis, Ill.	13.1	0	13.1	15.35	11.2
Joliet, Ill.	14.4	0	14.4	16.4	12.3
Peoria, Ill.	14.2	0	14.2	16.2	12.1
Quincy, Ill.	14.2	0	14.2	16.2	11.9
Indianapolis, Ind.	14.2	3	17.2	19.2	13.2
Evansville, Ind.	14	3	17	19	13
South Bend, Ind.	14.4	3	17.4	19.4	13.4
Detroit, Mich.	14.8	3	17.8	19.8	13.7
Grand Rapids, Mich.	14.7	3	17.7	19.7	13.6
Saginaw, Mich.	14.9	3	17.9	19.9	13.8
Green Bay, Wis.	14.6	2	16.6	18.6	12.4
Madison, Wis.	14.3	2	16.3	18.3	12.1
Milwaukee, Wis.	14.1	2	16.1	18.1	11.9
La Crosse, Wis.	15.2	2	17.2	19.2	13
Minneapolis, Minn.	15.2	2	17.2	19.2	12.9
Duluth, Minn.	15.5	2	17.5	19.5	12.9
Mankato, Minn.	12.1	2	14.1	16.1	12.7
Des Moines, Ia.	14.5	3	17.5	19.5	12.3
Davenport, Ia.	14.5	3	17.5	19.5	12.3
Sioux City, Ia.	14.1	3	17.1	19.1	11.9
Mason City, Ia.	14.5	3	17.5	19.5	12.3
St. Louis, Mo.	*13.6	2	15.6	17.9	11.3
Kansas City, Mo.	†14.9	2	16.9	18.9	10.6
St. Joseph, Mo.	†14.5	2	16.5	18.5	11.2
Fargo, N. D.	16.9	2	18.9	20.9	14.9
Grand Forks, N. D.	17.2	2	19.2	21.2	15.2
Minot, N. D.	16.9	2	18.9	20.9	14.9
Pierre, S. D.	15.5	4	19.5	21.5	13.9
Huron, S. D.	15.5	4	19.5	21.5	13.9
Wichita, Kans.	12.8	2	14.8	16.8	10.8
Bartlesville, Okla.	12.5	3	15.5	17.5	10.5

S. O. Indiana's quantity discount schedule on tank wagon deliveries of gasoline outside the city of Chicago is 1c for 50 gals. or more at one delivery; 1½c for 6,000 gals. or more a month; 2c for 10,000 gals. or more a month, and 3c for 15,000 gals. or more a month.

In Chicago, above discounts apply, except the 1c for 50 gal. dumps.

Service station discount is 2c per gal. to consumers of 200 gals. or more a month, or 2400 gals. per year.

Discount on kerosene is 1c on 50 gal. dumps throughout territory.

*Includes city tax of ½c.
†Includes city tax of 1c.

CONTINENTAL OIL

Denver, Colo.	14	3	17	20	14.5
Pueblo, Colo.	14	3	17	20	14.5
Grand Junction, Colo.	17.5	3	20.5	23.5	18
Casper, Wyo.	15	3	18	20	13
Cheyenne, Wyo.	16	3	19	21	14.5
Butte, Mont.	19.5	3	22.5	22.5	19
Helena, Mont.	19.5	3	22.5	24.5	19
Salt Lake City, Utah.	17.5	3½	21	23	17
Boise, Ida.	19.5	4	23.5	25.5	19
Twin Falls, Ida.	19.5	4	23.5	25.5	19
Albuquerque, N. M.	17	5	22	25	17

S. O. CALIFORNIA

Phoenix, Ariz.	12	4	16	20	21.5
Los Angeles, Cal.	13.5	3	16.5	20.5	15.5
Fresno, Cal.	14	3	17	21	16.5
San Francisco, Cal.	14	3	17	21	15.5
Reno, Nev.	18	4	22	26	19
Portland, Ore.	14.5	3	17.5	21.5	16.5
Seattle, Wash.	14.5	2	16.5	20.5	16.5
Spokane, Wash.	18.5	2	20.5	24.5	20.5
Tacoma, Wash.	14.5	2	16.5	20.5	16.5

S. O. LOUISIANA

Little Rock, Ark.	15	5	20	22	12
Alexandria, La.	14	2	16	18	†14
Baton Rouge, La.	13	2	15	17	†12.5
Lake Charles, La.	14.5	2	16.5	18.5	†14
New Orleans, La.	*14.5	2	*16.5	*18.5	†14
Shreveport, La.	14.5	2	16.5	18.5	†13
Lafayette, La.	14	2	16	18	†12.5
Bristol, Tenn.	17	3	20	22	14
Chattanooga, Tenn.	16.5	3	19.5	21.5	15
Knoxville, Tenn.	17	3	20	22	15
Nashville, Tenn.	16	3	19	21	15
Memphis, Tenn.	15	3	18	20	14

*New Orleans gasoline prices include 1c parish tax in addition to 2c state tax, and kerosene prices include 1c state tax and 1c parish tax.
†Kerosene price in Louisiana includes 1c state tax.

S. O. OHIO

	Gasoline T.W.	Tax	Gasoline Total T.W.	Gasoline S.S.	Oil T.W.
All Ohio points	14	3	17	19	14

S. O. NEBRASKA

Omaha, Neb.	14.25	2	16.25	18.25	12.25
McCook	15.75	2	17.75	19.75	13.75
Norfolk	14.75	2	16.75	18.75	12.75
North Platte	15.75	2	17.75	18.5	13.50
Scottsbluff	15.25	2	17.25	19.25	13.00

MAGNOLIA PETROLEUM

Muskogee, Okla.	14	3	17	18	11
Oklahoma City	13	3	16	18	11
Tulsa, Okla.	12	3	15	17	11
Fort Smith, Ark.*	15	*3	18	20	12
Little Rock, Ark.	15	5	20	22	12
Texarkana, Ark.*	13.5	*3	16.5	20.5	12
Dallas, Tex.	11	3	14	18	11
Fort Worth, Tex.	12	3	15	18	11
Houston, Tex.	11	3	14	18	15
San Antonia, Tex.	12	3	15	18	10
El Paso, Tex.	14	3	17	20	16

*Within City of Texarkana and Fort Smith, the state tax on gasoline is 3c per gal. conforming with the Texas state tax. In these two districts outside of the city the 5c Arkansas tax applies.

V. M. & P. NAPHTHA

(Changes ordinarily occur coincident with gasoline price changes)

	Oleum Spirits	V.M.&P. Naphtha	Cleaner Naphtha
Chicago	14.7	16.2	18
Detroit	16.4	17.9	19.7
Kansas City	†14.9	†16.4	†18.2
Milwaukee	15.4	*18.9	*20.7
Minneapolis	*18.7	*20.2	*22
St. Louis	14.6	16.1	17.9
New York		19	

*Includes 2c state tax. †Includes 1c city tax.

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

	Gasoline T.W.	Tax	Gasoline Total T.W.	Gasoline S.S.	Oil T.W.
ONTARIO					
Toronto	19.5	3	22.5	26	21
Ottawa	19.5	3	22.5	26	21
Cochrane	24.5	3	27.5	36	26
Ft. William	22.5	3	25.5	29	22.5
MANITOBA					
Winnipeg	21.5	3	24.5	28	21.5
SASKATCHEWAN					
Regina	25.5	3	28.5	33	25.5
ALBERTA					
Edmonton	26.5	3	29.5	33	26.5
Calgary	22.5	3	25.5	29	22.5
BRITISH COLUMBIA					
Vancouver	21	5	26	30	22
QUEBEC					
Montreal	20.5	5	25.5	29	21
Quebec City	22.5	5	27.5	33	23
Three Rivers	22.5	5	27.5	31	23
NEW BRUNSWICK					
St. John	22.5	3	25.5	30	22
Moncton	22.5	3	25.5	30	22
NOVA SCOTIA					
Halifax	22.5	5	27.5	32	22
Sydney	22.5	5	27.5	32	22
PRINCE EDWARD ISLAND					
Charlottetown	22.5	5	27.5	31	22

Note: In districts surrounding these points 1c additional is added to city price.

Above prices include these inspection fees on both gasoline and kerosene, per gallon: Alabama, 1/40c on gasoline, 1/2c kerosene; Arkansas, 1/20c on both; Colorado, 1/10c on both: Florida, 1, 8c; Indiana, 2/25c; Kansas, 1/50c; Louisiana, 1/32c on gasoline, 1c on kerosene; Minnesota, 3/50c; Missouri, 1/50c; Nebraska, 3/50 to 1/2c; North Carolina, 1/4c; North Dakota, 1/20c; Oklahoma, 4/25c; South Carolina, 1/8c; South Dakota, 1/10c; Tennessee, 2/5c on gasoline and 1/2c on kerosene; Wisconsin, 3/50c.

Kerosene inspection fees only: Iowa, 13/100c; Michigan, 1/5 to 4/5c per gal.

In Illinois, cities and villages have the power to appoint oil inspectors and fix inspection fees which is done in some instances. In some cases in the above states or other states there are local inspection fees.

Eastern Prices Steady Despite Inclement Weather

Staff Special
NEW YORK, May 26

INCLEMENT weather was the only element this week which held Atlantic coast gasoline markets from continuing the upward trend that has been under way since March 1. Showers, with abnormally low temperatures for the season, were general over virtually the entire seaboard territory most of the week.

Jobbing demand for spot gasoline fell off considerably but prices showed no reaction. Gasoline markets opened at last week's price levels and were steady throughout most of the week. Despite the foreboding weather forecast for the week end, a number of major companies were inclined to tack on an additional 0.25-cent to their quotations for U. S. Motor both for spot and June.

The probability of heavy gasoline consumption next week in view of the Memorial Day holiday added somewhat to the optimistic stand of the trade. A continuance of favorable reports on the statistical position of gasoline also served to counteract the current unfavorable weather element.

The question of prices for June gasoline, one which it was thought would be settled this week, was still an enigma on May 26. Several companies announced early in the week they would take on June business at the same price they were quoting for spot shipment and then withdrew their quotations.

The trade was not unanimous in this decision. Late in the week most of the companies who had adopted the policy of selling for June at current prices said they had offered goods on this basis to their regular customers only, and in view of majority of sellers withholding June quotations, theirs would be withdrawn.

A few distress cars of U. S. Motor gasoline were offered by New York harbor sellers at 0.375-cent under the current quotations of a majority of the trade early this week. Reports that one company was offering goods over June at this price,—9.875 cents, and even lower, were unfounded. Some goods was sold for immediate shipment, the company reported, and in no way was representative of the spot market, let alone the June market. The volume involved was negligible compared to volume going at higher prices, it said.

Two large sellers in the Philadelphia market adopted the policy of quoting gasoline on a delivered basis this week. For U. S. Motor delivered in Philadelphia they were asking 12 cents. To points which take a higher freight rate they were quoting proportionately higher, with a maximum of 12.25 cents, delivered. Other sellers in the Philadelphia market continued to quote 10 to 10.25 cents, f.o.b. shipping point.

There was no change in the Baltimore market. New England markets also were quoted at last week's levels, with the exception of one refiner who advanced his price 0.25-cent to 11 cents, f.o.b. shipping point, for U. S. Motor. On the basis of delivered in Boston and Providence, most New England sellers were asking 11.50 to 12 cents.

No cargo purchases of California gasoline were reported by eastern buyers this week. Prices west coast refiners were asking for U. S. Motor together with higher tanker rates prevented them from viewing this market in a profitable light.

California gasoline in tank cars was largely quoted at 10.50 cents in New York harbor. It was available at 0.25-cent less from one company in the Philadelphia market. At Baltimore, dealers handling this goods were asking 10.25 to 10.50 cents.

No change was noted in quotations for kerosene with most companies asking 7.50 to 7.75 cents for water white all along the seaboard.

Bunkers were quoted at $1.25 in New York harbor. Cargoes of grade C were reported available at considerably under this figure.

French Are Most Active Buyers In Gulf Market

Staff Special
NEW YORK, May 26

A FAIRLY active demand for gasoline and kerosene from French oil companies featured the Gulf export market this week. Transactions involving about 200,000 barrels were closed. Prices at which the bulk of the business was taken were at or slightly lower than those prevailing a week ago.

Foreign interest fell off a bit toward the end of the week but there were still a number of inquiries in the market representing a goodly volume of business.

French subsidiaries of leading refiners were the most active in this week's market. Early in the week an independent refiner sold approximately 66,000 barrels of U. S. Motor and 64-66, 375 end point gasoline, prime white and water white kerosene to its French company. Prices were 8.75 cents, 9.375 cents, 6.50 cents, and 7.50 cents, respectively. The cargo is to be lifted between June 15 and July 15. The parent company acting as seller in the deal was forced to purchase the cargo from another supplier, due to a shortage of material.

An independent French buyer on May 22 purchased approximately 50,000 barrels of 64-66, 375 end point gasoline, prime white and water white kerosene from a Standard company at 9.375 cents, 6.50 cents and 7.50 cents, respectively for July 15-Aug. 15 loading.

The French subsidiary of a Standard company on May 24 closed a deal involving nearly 68,000 barrels of 64-66, 375 end point gasoline and prime white kerosene at 9.375 cents and 6.50 cents, respectively. This cargo is to be lifted between July 5 and Aug. 15.

Among the more important inquiries remaining in the market Saturday was one from an independent French buyer for 50,000 barrels of U. S. Motor and 64-66, 375 end point gasoline for second half of August loading. The closing of this business was awaited with considerable interest on the part of the trade in view of the fact that a third of the cargo will be U. S. Motor.

A strictly open market sale of this commodity has not been made in some time, the recent sales having been those made by parent companies to subsidiaries. Also the fact that the buyer was willing to commit himself as far ahead as the time designated added to interest in the deal. The question of prices for that period was viewed as another important factor.

The market was in somewhat of an unsettled state as the week ended in view of the variance among suppliers in their ideas of prices. There were a few major companies still quoting 8.75 cents for U. S. Motor gasoline, whereas most suppliers were asking up to 9 cents for this commodity. By virtue of three cargoes having been closed this week with 64-66 taking 9.375 cents, several suppliers continued to quote this price as their ideas of the market. Other suppliers were asking as high as 9.625 cents.

There was less difference of opinion regarding prices for kerosene. Most companies quoted 6.50 cents for prime white and 7.50 cents for water white stating that these prices

Complete Seaboard Market

(Export markets for whole year given in OIL PRICE HANDBOOK. Each volume carries refinery, tank wagon, crude and export markets—complete for the years 1924-1925-1926-1927)

Eastern Domestic Market

(Prices for tank car lots, f. o. b. refinery or seaboard terminal, represent majority of quotations and sales.)

	May 28	May 21	May 14
U.S. Motor gasoline, New York harbor	10.25	10.25	9.75 -10.00
U.S. Motor gasoline, Philadelphia	10.25	10.00 -10.25	9.50 -10.25
U.S. Motor gasoline, Boston district	10.50 -11.00	10.50 -11.00	10.50 -10.75
U.S. Motor gasoline, Providence district	10.50 -10.75	10.50 -10.75	10.50 -10.75
U.S. Motor gasoline, Baltimore	10.25	10.25	9.75 -10.00
U.S. Motor gasoline, Norfolk	10.25	10.00 -10.25	9.75 -10.00
U.S. Motor gasoline, Charleston	10.00	10.00	9.50 -10.00
U.S. Motor gasoline, Savannah	9.50 - 9.75	9.50 - 9.75	9.25 - 9.75
U.S. Motor gasoline, Jacksonville	9.50 - 9.75	9.50 - 9.75	9.25 - 9.75
California U.S. Motor gasoline, New York Harbor	10.50	10.50	10.25
California U.S. Motor gasoline, Baltimore	10.50	10.25 -10.50	10.25
California U.S. Motor gasoline, Philadelphia	10.50	10.00 - 10.25	9.50 -10.00
Water white kerosene, New York Harbor	7.50 - 7.75	7.50 - 7.75	7.50
Water white kerosene, Philadelphia	7.50 - 7.75	7.50 - 7.75	7.50 - 7.75
Water white kerosene, Baltimore	7.50 - 8.00	7.50 - 7.75	7.50 - 7.75
28-34 gas oil, New York harbor	4.50 - 4.75	4.50 - 4.75	4.50 - 4.75
28-34 gas oil, Boston district	4.75 - 5.00	4.75	4.50 - 4.75
36-40 furnace oil, New York harbor	5.75	5.75	5.50 - 5.75
36-40 furnace oil, Boston district	6.00	5.75 - 6.00	5.75
Grade C bunker oil, New York harbor	$1.25	$1.25	$1.25
Grade C bunker oil, Boston district	$1.25	$1.25	$1.25
Diesel oil, New York harbor	$2.00	$2.00	$2.00

Note: Above prices do not include inspection tax levied in some states.

MEDICINAL OILS

Russian 885-890 s.g., 325-330 vis	$0.80 - 0.90	$0.80 - 0.90	$0.80 - 0.90
Russian 870-875 s.g., 150-155 vis	$0.67 - 0.77	$0.67 - 0.77	$0.67 - 0.77
Russian 860-865 s.g., 80-85 vis	$0.65 - 0.75	$0.65 - 0.75	$0.65 - 0.75

New York Export Market

(Gasoline and kerosene in cases in bulk. Lubricating oils are per gal. in bbls. Cylinder oils are Penna. products.)

	May 28	May 21	May 14
U. S. Motor gasoline	25.40	25.40	25.40
43-45 150 w.w. kerosene	18.40	18.40	18.40
42-44, 110 s.w. kerosene	17.40	17.40	17.40
CYLINDER OILS			
Bright stock, dark	34.50 -35.00	34.50 -35.00	33.50 -34.50
600 D filtered	31.00 -32.00	31.00 -32.00	31.00
600 Warren E filtered	23.50 -24.50	23.50 -24.50	23.50 -24.50
600 s.r. unfiltered	17.00 -18.00	17.00 -18.00	17.00 -17.50
650 s.r. unfiltered	19.00 -19.50	19.00 -19.50	18.75 -19.50
600 flash s.r.	21.00 -25.00	21.00 -25.00	21.00 -21.50
630 flash, s.r.	33.00 -35.00	33.00 -35.00	32.00 -34.00
RED ENGINE OILS (Vis. 100°)			
300 vis. No. 6½ color	19.50	19.50	19.50 -20.00
250 vis. No. 6 color	18.50	18.50	18.50 -19.00
200 vis. No. 6 color	18.00	18.00	18.00 -18.50
PALE ENGINE OILS (Vis. 100°)			
230 vis. No. 3¾ color	23.50	23.50	24.00
180 vis. No. 3¼ color	19.50	19.50	20.00
100 vis. No. 2¼ color	15.25	15.25	15.75
MOTOR OILS (Vis. 100°)			
600 vis. No. 7 color	34.50	34.50	35.00
500 vis. No. 6½ color	32.50	32.50	33.00
400 vis. No. 7¼ color	30.50	30.50	31.00
300 vis. No. 6 color	29.50	29.50	30.00
200 vis. No. 3¼ color	23.00	23.00	24.00
MEDICINAL OILS			
875-885 s.g.	$0.80	$0.80	$0.80
865-870 s.g.	$0.70	$0.70	$0.70

WAXES (In cents per pound, f.a.s. carload lots)

WHITE CRUDE SCALE (In barrels)

	May 28	May 21	May 14
122-124 A.m.p.	4.00 - 4.25	4.00 - 4.125	3.875- 4.00
124-126 A.m.p.	4.00 - 4.25	4.00 - 4.125	3.875- 4.00
FULLY REFINED (In burlap bags)			
123-125 A.m.p. Phila.	4.50 - 4.625	4.50	4.50
125-127 A.m.p	4.50 - 4.625	4.50	4.50
128-130 A.m.p.	4.75 - 4.875	4.75 - 4.875	4.625
130-132 A.m.p.	5.25 - 5.50	5.00 - 5.25	5.00
133-135 A.m.p.	*6.00	*5.75 - 6.00	5.75
135-137 A.m.p.	6.75	*6.25 - 6.75	6.25 - 6.50
YELLOW CRUDE SCALE			
124-126 A.m.p.	4.00	3.875- 4.00	3.75

***Prices nominal.**

Gulf Export Market

(Prices are f. o. b. Gulf oil terminals in Texas and Louisiana, shipments of 20,000 bbls. and over unless otherwise noted, representing sellers' opinions, except those prices specified to the contrary)

GASOLINE	May 28	May 21	May 14
U.S. Motor	8.75 - 9.00	8.75	8.75
60-62, 400 e.p.	9.00	9.00	9.00
61-63, 390 e.p.	9.125- 9.25	9.25	9.25
64-66, 375 e.p.	9.375- 9.625	9.50	9.50
U. S. Motor, cases (cargoes)	$1.75	$1.75	$1.75
64-66, cases (cargoes)	$1.85	$1.85	$1.85

***Sales only.**

KEROSENE

44 water white	7.50	7.50	7.50
41-43 prime white	6.50	6.50	6.50
Water white, cases (cargoes)	$1.65	$1.65	$1.65
Prime white, cases (cargoes)	$1.55	$1.55	$1.55

DOMESTIC GAS & BUNKER OILS

*26-30 translucent gas oil	3.875- 4.00	3.875- 4.00	3.875- 4.00
*30-32 translucent gas oil	4.00	4.00	4.00
Grade C bunker oil	$0.95 - 1.10	$0.95 - 1.10	$1.00 -$1.10
Grade C bunker oil, cargoes	$0.85 - 0.90	$0.88 - 0.90	$0.90

***Less than ½ of 1% sulfur.**

MEXICAN CRUDE AND BUNKER OILS (F.O.B. Steamer, Tampico)

Heavy Panuco crude taxes to be paid	$1.02 -$1.05	$1.02 -$1.05	$1.02 -$1.05
Grade C bunker oil, for bunkering purposes, taxes paid	$1.15	$1.15	$1.15

SOUTH TEXAS LUBRICATING OILS (Viscosity at 100°F.; cold test 0) (Tanker, f.o.b. Houston)

100 vis. No. 2 unfiltered pale	6.00	6.00	6.00
200 vis. No. 3 unfiltered pale	7.75 - 8.00	7.75 - 8.00	7.75 - 8.00
300 vis. No. 3 unfiltered pale	9.25	9.25	9.25
500 vis. No. 3½ unfiltered pale	11.50 -11.75	11.50 -11.75	11.50 -11.75
750 vis. No. 4 unfiltered pale	12.50 -13.00	12.50 -13.00	12.50 -13.00
1200 vis. No. 5 unfiltered pale	15.50 -16.00	15.50 -16.00	15.50 -16.00
200 vis. No. 5-6 red oil	7.00 - 7.50	7.00 - 7.50	7.00 - 7.50
300 vis. No. 5-6 red oil	8.00 - 8.50	8.00 - 8.50	8.00 - 8.50
500 vis. No. 5-6 red oil	10.00	10.00	10.00
750 vis. No. 5-6 red oil	11.25 -11.50	11.25 -11.50	11.25 -11.50
1200 vis. No. 5-6 red oil	14.50 -15.50	14.50 -15.50	14.50 -15.50

Pacific Export Market

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

	May 28	May 21	May 14
Gasoline, U. S. Motor, 53-55 Gravity	7.50 - 8.00	7.50 - 8.00	7.50 - 8.00
Gasoline, U. S. Motor, blends and special cuts	9.00 - 9.50	9.00 - 9.50	9.00 - 9.50
Gas Oil, 30-34, per barrel	$1.10 -$1.20	$1.10 -$1.20	$1.10 -$1.20
Diesel Oil, 27 plus, per barrel	$0.95 -$1.10	$0.95 -$1.10	$0.95 -$1.10
Bunker oil, 14-18, per barrel	$0.80 -$1.00	$0.80 -$1.00	$0.80 -$1.00
Fuel oil, 14-18, per barrel	$0.75 -$1.00	$0.75 -$1.00	$0.75 -$1.00
Kerosene, 38-40 w.w., 125-150 flash, per gal.	4.50 - 5.00	4.50 - 5.00	4.50 - 5.00
Cased Goods			
Gasoline, U. S. Motor	$1.80 -$2.00	$1.80 -$2.00	$1.70 -$1.80
Kerosene, 38-40 w.w., 125-150 flash	$1.45 -$1.50	$1.45 -$1.50	$1.40 -$1.45

Crude Oil Prices, as Posted by Major

(Crude prices for years 1924-1925-1926-1927 in

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

Penna. Grade Oil in New York Transit Lines (Alleghany, N. Y. District)	$2.80
Bradford District Oil in National Transit Lines (Bradford District)	2.80
Penna. Grade Oil in National Transit Lines (Other Pennsylvania)	2.65
Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania)	2.65
Penna. Grade Oil in Eureka Pipe Lines (West Virginia)	2.60
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O. district)	2.35
Keister Grade in National Transit Lines (Butler Co)	1.10
Cabell Grade in Eureka Pipe Lines (West Virginia)	1.35
Corning Grade in Buckeye Pipe Lines (Ohio)	1.55
Corning, O. heavy grade	1.45
*Somerset Oil in Cumberland Pipe Lines (Kentucky)	1.45
Ragland Grade in Cumberland Pipe Lines (Kentucky)	.95

*Somerset oil run prior to Oct. 1922, takes price of 6 cents lower than above quotations.

(Posted by Stoll Oil Refining Co.)

Oil City, Ky., oil in Stoll lines	$1.50

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

Wooster	$1.57	Plymouth	$1.23
Lima	1.55	West Kentucky	1.33
Waterloo	1.20	*Canadian Petro.	1.95
Indiana	1.32	*Oil Springs	2.02
Princeton	1.50	*Posted by Imperial Oil Ltd.	
Illinois	1.50		

OKLAHOMA, KANSAS and NORTH TEXAS

Prices of Prairie Oil & Gas Co.

(In Oklahoma, Kansas, North and East Central Texas)

Effective Feb. 21, 1928

28-28.9	$0.96	41-41.9	$1.43
29-29.9	1.01	42-42.9	1.46
30-30.9	1.06	43-43.9	1.49
31-31.9	1.11	44-44.9	1.52
32-32.9	1.16	45-45.9	1.55
33-33.9	1.19	46-46.9	1.58
34-34.9	1.22	47-47.9	1.61
35-35.9	1.25	48-48.9	1.64
36-36.9	1.28	49-49.9	1.67
37-37.9	1.31	50-50.9	1.70
38-38.9	1.34	51-51.9	1.73
39-39.9	1.37	52 and above	1.76
40-40.9	1.40		

Humble Oil & Refining Co. Prices

(Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona crudes all in Texas.)

Effective Feb. 21, 1928

Below 25	$0.76	26-26.9	$0.86
25-25.9	0.81	27-27.9	0.91

Humble Prices (Cont'd)

28-28.9	$0.96	37-37.9	$1.31
29-29.9	1.01	38-38.9	1.34
30-30.9	1.06	39-39.9	1.37
31-31.9	1.11	40-40.9	1.40
32-32.9	1.16	41-41.9	1.43
33-33.9	1.19	42-42.9	1.46
34-34.9	1.22	43-43.9	1.49
35-35.9	1.25	44 and above	1.52
36-36.9	1.28		
Mirando, Tex			$1.00

Magnolia Petroleum Co.

(In Oklahoma, Kansas and North and East Central Texas)

Feb. 21, Magnolia posted in above fields and in Panola Co., same schedule as Prairie, except these grades, unchanged from Feb. 16:

Below 30	$0.75
30-30.9	0.90
31-31.9	1.05
Glasscock and Howard Counties	$0.60
Chalkfield (Howard Co.)	$0.80
Iatan district	$0.93
Corsicana heavy	$1.00

Carter Oil Co.

(Oklahoma and Kansas)

Feb. 21, same schedule as Prairie plus these grades:

24-24.9	$0.76	26-26.9	$0.86
25-25.9	0.81	27-27.9	0.91

PANHANDLE, TEXAS

Humble Oil & Refining Co.

Effective Feb. 21, 1928

Hutchinson and Carson Counties:

Below 31	$0.60	38-38.9	$0.88
31-31.9	0.65	39-39.9	0.91
32-32.9	0.70	40-40.9	0.94
33-33.9	0.73	41-41.9	0.97
34-34.9	0.76	42-42.9	1.00
35-35.9	0.79	43-43.9	1.03
36-36.9	0.82	44 and above	1.06
37-37.9	0.85		

Wheeler County:

Below 29	$0.60	37-37.9	$0.95
29-29.9	0.65	38-38.9	0.98
30-30.9	0.70	39-39.9	1.01
31-31.9	0.75	40-40.9	1.04
32-32.9	0.80	41-41.9	1.07
33-33.9	0.83	42-42.9	1.10
34-34.9	0.86	43-43.9	1.13
35-35.9	0.89	44 and above	1.16
36-36.9	0.92		

Gray County:

Below 27	$0.60	36-36.9	$1.02
27-27.9	0.65	37-37.9	1.05
28-28.9	0.70	38-38.9	1.08
29-29.9	0.75	39-39.9	1.11
30-30.9	0.80	40-40.9	1.14
31-31.9	0.85	41-41.9	1.17
32-32.9	0.90	42-42.9	1.20
33-33.9	0.93	43-43.9	1.23
34-34.9	0.96	44 and above	1.26
35-35.9	0.99		

WEST TEXAS

Humble Oil & Refining Co.

Effective Aug. 23, 1927

Crane, Upton, Crockett and Pecos Counties	$0 60

NORTH LOUISIANA—ARKANSAS FIELDS

Prices of Standard Oil Co. of Louisiana Caddo, Homer, Haynesville, Bull Bayou, El Dorado, Crichton and De Soto

Effective Feb. 21, 1928

Below 28	$0.91	40-40.9	$1.40
28-28.9	0.96	41-41.9	1.43
29-29.9	1.01	42-42.9	1.46
30-30.9	1.06	43-43.9	1.49
31-31.9	1.11	44-44.9	1.52
32-32.9	1.16	45-45.9	1.55
33-33.9	1.19	46-46.9	1.58
34-34.9	1.22	47-47.9	1.61
35-35.9	1.25	48-48.9	1.64
36-36.9	1.28	49-49.9	1.67
37-37.9	1.31	50-50.9	1.70
38-38.9	1.34	51-51.9	1.73
39-39.9	1.37	52 and above	1.76

Cotton Valley, below 36, $0.75. Rest of Cotton Valley schedule, beginning with 36-36.9 at $1.28, same as Caddo, Homer, etc.

Smackover, below 24	$0.75
do 24 and above	.90
Bellevue	1.25
*Urania, La.	.75
†East El Dorado	1.00

*Posted by Louisiana Oil Refining Corp.

†Posted by Magnolia Petroleum Co.

Smackover prices posted on Feb. 7 by S. O. La., Gulf, Shreveport-El Dorado Pipe Line, Atlantic Oil Producing Co. and The Texas Co.; on Feb. 8 by Magnolia; on Feb. 6, by La. Oil Refg. Corp

STEPHENS, ARKANSAS

Louisiana Oil Refining Corp.

Below 28	$0 85	30-30.9	$0.91
28-28.9	0.87	31-31.9	0.93
29-29.9	0.89	32 and above	0.95

GULF COASTAL

Posted by Humble Oil & Refining Co.

Effective March 14, 1927

Grades A	$1.20	29-29.9	$1.25
Grades B:		30-30.9	1.27
Below 25	1.15	31-31.9	1.29
25-25.9	1.17	32-32.9	1.31
26-26.9	1.19	33-33.9	1.33
27-27.9	1.21	34-34.9	1.35
28-28.9	1.23	35 and above	1.37

Fields classified as A and B are Spindletop, Goose Creek, Hull, Liberty, Sour Lake, West Columbia Orange, Boling and Pierce Junction. All other fields are Grades A only.

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could likely be done for full cargoes as well as mixed cargo lots.

Gas oil was quiet with no open market inquiries reported this week. Heavy fuel oil was quoted slightly lower. Grade C was offered at $0.87 a barrel in cargoes with the opinion general among the trade that $0.85 could be done with firm offer.

There was a routine demand for bunkers at most Gulf ports. Grade C in the New Orleans district sold at $0.95 a barrel and 10 to 15 cents a barrel higher in the Houston district.

AMARILLO, May 26.—The Panhandle Geological Society has elected John L. Ferguson, of the Amerada Petroleum Corp. president for the next year; J. J. Maucini, of the Marland Production Co., vice-president and Lawrence R. Hagy, consulting geologist, secretary and treasurer.

Wax Price Up 1/4 Cent In New York

NEW YORK, May 26.—Continued disinterest on the part of foreign wax buyers did not keep prices in the New York market from advancing to new high levels for the year. Under the stimulus of active demand from resale agents, prices for white crude scale advanced 0.25-cent. The higher melting point fully refined grades also were up 0.125 to 0.25-cent a pound.

Actual sales were comparatively few this week. One large refiner reported selling 200 tons of white crude scale at 4.25 cents for May delivery. Numerous bids of 4.125 cents for May wax were reported.

Little June buying has developed as yet, but for the most part refiners are asking 0.125-cent above their current quotations for delivery during this period. One large United Kingdom buyer was said to be feeling out the market with a view to purchasing his June requirements next week.

The New Orleans market was virtually at a standstill with buyers bidding 3.875 cents a pound for white crude scale and suppliers asking 0.125-cent higher. Some business has been closed on the basis of the latter price. The inquiry from South America was somewhat better than a week ago. Fully refined waxes were generally unchanged in price at New Orleans.

New Gasoline Plant at Long Beach

LONG BEACH, May 25.—Dabney-Gilmore Gasoline Corp. has awarded a contract to J. A. Campbell for the construction of a new natural gasoline plant at Long Beach, to have a daily capacity of 30,000 gallons. Campbell equipment is to be used throughout.

Purchasers, in All Fields (in Effect May 28)

OIL PRICE HANDBOOK published annually)

GULF COASTAL

Prices of The Texas Co.

Effective March 14, 1927

Grades A.....$1.20	*Grades B.....$1.15
‡Grades B (light crude):	
35-35.9.....$1.37	38-38.9.....$1.43
36-36.9..... 1.39	39-39.9..... 1.45
37-37.9..... 1.41	40 and above.... 1.47

*Grades B include all heavy crudes which do not meet tests for Grades A or for Gulf Coast light crude.

‡The Texas Co.'s gravity and price schedule on oil below 35° is same as Humble's postings on Grades B.

ROCKY MOUNTAIN FIELDS

Prices of Ohio Oil Co., and Midwest Refining Co.

(Salt Creek prices effective Feb. 21, 1928)

‡Salt Creek below 29	$0.96
" " 29-29.9	1.01
" " 30-30.9	1.06
" " 31-31.9	1.11
" " 32-32.9	1.16
" " 33-33.9	1.19
" " 34-34.9	1.22
" " 35-35.9	1.25
" " 36-36.9	1.28
" " 37 and above	1.31
Elk Basin	1.33
Grass Creek light	1.33
Big Muddy	$1.25
Lance Creek	1.33
Rock Creek	1.25
Mule Creek	1.10
Rex Lake	1.10
‡Osage	1.33
‡Cat Creek, Mont.	1.33
Sunburst, Mont.	1.65
‡Hogback, N. Mex.	1.38
Artesia, N. Mex.	1.00

‡Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin.

The Texas Co. buys Salt Creek and Big Muddy crude

CALIFORNIA

Standard Oil Co. of California

Santa Maria and Ventura Posted by Union Oil Co.

Gravity	Signal Hill, Seal Beach, Alamitos Heights, Huntington Beach	Inglewood, Torrance	Whittier, La Habra	Newhall, McKittrick, Kern River	Olinda-Brea, Canon, Richfield	Athens-Rosecrans-Dominguez	Montebello	Coyote Hills	Santa Fe Springs	Midway, Sunset, Buena Vista & Elk Hills	Lost Hills	Coalinga	Wheeler Ridge	Santa Maria	Ventura
14-14.9	$ .85	$ .85	$ .85	$ .75	$ .85	....	$ .85	$ .85	....	$ .75	$ .75	$ .75	$ .75	$ .85	$ .85
15-15.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
16-16.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
17-17.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
18-18.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
19-19.9	.85	.85	.85	.75	.85	....	.85	.85	....	.75	.75	.75	.75	.85	.85
20-20.9	.85	.85	.85	....	.85	....	.85	.85	....	.77	.77	.76	.76	.85	.85
21-21.9	.86	.86	.85	....	.86	....	.85	.86	.85	.79	.79	.77	.77	.85	.85
22-22.9	.87	.87	.85	....	.87	....	.85	.87	.85	.81	.81	.78	.78	.85	.85
23-23.9	.88	.88	....	....	.88	....	.85	.88	.85	.83	.83	.79	.79	.85	.85
24-24.9	.89	.89	....	....	.89	$ .89	.85	.89	.85	.85	.85	.80	.80	.85	.85
25-25.9	.90	.90	....	....	.90	.90	.86	.90	.86	.87	.87	.81	.81	.86	.86
26-26.9	.92	.92	....	....	.92	.92	.87	.91	.87	.89	.89	.83	.82	.87	.87
27-27.9	.94	.94	....	....	.94	.94	.88	.92	.88	.91	.91	.85	.83	.88	.88
28-28.9	.96	.96	....	....	.96	.96	.89	.93	.89	.93	.93	.87	....	.89	.89
29-29.9	.98	....	....	....	.98	.98	.90	.94	.91	.96	.96	.89	....	.91	.91
30-30.9	1.00	....	....	....	1.00	1.00	.91	.95	.93	.99	.99	.91	....	.93	.93
31-31.9	1.03	....	....	....	....	1.03	....	....	.95	1.02	1.02	.93	....	....	.95
32-32.9	1.06	....	....	....	....	1.06	....	....	.97	1.05	1.05	.95	....	....	.97
33-33.9	....	....	....	....	....	1.09	....	....	.99	1.08	1.08	.97	....	....	.99
34-34.9	....	....	....	....	....	1.12	....	....	1.01	....	1.11	.99	....	....	1.01
35-35.9	....	....	....	....	....	1.15	....	....	1.03	....	....	1.01	....	....	1.03
36-36.9	....	....	....	....	....	1.18	....	....	1.06	....	....	....	....	....	1.06
37-37.9	....	....	....	....	....	1.21	....	....	1.09	....	....	....	....	....	1.09
38-38.9	....	....	....	....	....	1.24	....	....	1.12	....	....	....	....	....	1.12
39-39.9	....	....	....	....	....	1.27	....	....	1.15	....	....	....	....	....	1.15
40-40.9	....	....	....	....	....	1.30	....	....	....	....	....	....	....	....	....
41-41.9	....	....	....	....	....	1.33	....	....	....	....	....	....	....	....	....
42-42.9	....	....	....	....	....	1.36	....	....	....	....	....	....	....	....	....

*Union Oil Co. also purchases Long Beach Crude and is maintaining the same gravity and price schedule in that field as the Standard maintains in Signal Hill and Huntington Beach fields. The Union also buys and pays the same prices as the Standard in the Rosecrans-Dominguez fields, on gravities ranging from 14 degrees to and including 24.9 degrees and in Santa Fe Springs, on gravities ranging from 20 to and including 23.9 degrees.

REFINERS' and COMPOUNDERS' SUPPLIES

Following are average market prices for materials used by refiners and compounders as effective the date shown.

Refiners' Supplies

	May 28	May 21
Soda Ash light 58% bags, cwt.	$1.32	$1.32
Silicate of Soda 60 deg. drums, cwt.	$1.65	$1.65
Silicate of Soda 40 deg. tank cars, cwt.	$0.60	$0.60
Silicate of Soda 40 deg. drums, cwt.	$0.70-0.75	$0.70-0.75
Sal Soda wks.	$0.90	$0.90
Caustic Soda 76% solid, cwt.	$2.90	$2.90
Sulfuric Acid 60 deg. tank cars, f.o.b. shipping point per ton	$11.00	$11.00
Oleum 20%, fuming sulfuric, tank cars, wks	$18.50	$18.50
Sulfur, flowers of.....cwt.	$3.10-4.00	$3.10-4.00
Liquid Chlorine, tank cars, wks.....lb.	3.50-5.00	3.50-5.00
Litharge, powdered, casks, cwt.	$8.50	$8.50

Compounders' Supplies

Vegetable Oils		
Linseed carloads, spot.....lb.	10.40	10.30
Tanks, spot	9.60	9.50
Soya Bean, Tanks, coast, lb.	9.75	9.75
Oleic Acid		
Distilled, tanks.....lb	9.00	9.00
Distilled, bbls.....lb	9.75	9.75
Saponified, tanks.....lb	9.25	9.25
Saponified, bbls.....lb	10.00	10.00
Lard Oils		
Prime Winter Strained...lb	16.25	16.25
Extra Winter Strained....lb	13.25	13.00
Extra.....lb	12.75	12.25
Extra No. 1.....lb	12.25	12.00
No. 1.....lb	11.75	11.50
No. 2.....lb	11.375	11.00
Tallow oil.....lb.	11.625	11.50
Neatsfoot Oil		
Pure, bbls.....lb	15.75	15.75
Extra, bbls.....lb	12.50	12.25
No. 1, bbls.....lb	12.00	11.75
Cold Pressed.....lb	18.75	18.50
Fish Oils		
Menhaden Oil		
Light Pressed.....gal	63-65	63-65
Light Pressed, tank cars, N. Y.....gal.	54-56	54-56
White bleached.....gal.	70-71	70-71
Yellow bleached.....gal.	68-69	68-69
Whale, extra winter bleached.....gal.	84	84
Naval Stores		
Steam distilled turpentine, N. Y.....gal.	50	50
Steam distilled turpentine, Savannah.....gal.	45	45
Gum turpentine, N. Y....gal.	53	53
Gum turpentine, f.o.b. cars Savannah.....gal.	49	49
Wood Rosin F, N. Y.....bbl.	$7.30	$7.30
Wood Rosin F, Savn'h...bbl.	$6.50	$6.50
Gum Rosin B, N. Y.....bbl.	$6.80	$7.50
Gum Rosin B, f.o.b. cars Savannah.....bbl	$6.10	$6.75
Rosin oil, pure.....gal	50	50
Rosin oil, compounded...gal	41	41
Pine Tar		
Kiln burnt.....bb	$12.50-14.00	$12.50-14.00
Retort.....bb	$13.50-15.50	$13.50-15.50
Alcohol		
Denatured, Formula 5, in bbls., per gal.	50-54	50-54

*Nominal

Gasolines Show More Strength In Chicago Resale Market

Staff Special

CHICAGO, May 26

GASOLINES continued to hold the center of interest in the Chicago resale market in week ended May 26. While other products showed signs of slipping, gasoline prices held up and in most cases strengthened further as the week closed.

Spot demand was good all week, reports from most of the trade indicated. Some sellers reported sales below last week while others enjoyed a better demand. Practically all sellers believe that most jobbers are buying only for current requirements, with storage well filled.

What price to quote on gasoline over June was the problem of the trade as the week closed. Some sellers said they would be willing to sell U. S. Motor at 8 cents, while others were holding for 8.125 cents. A considerable number of refiners were refusing to sell any gasoline for deferred shipment at all and in some cases would sell only for delivery up to June 1.

One refiner reported selling a few cars for delivery over the first week in June at 7.75 cents. Another reported receiving inquiries totaling 200 cars for U. S. Motor for June delivery into Ohio and a marketer reported an inquiry for 150 cars of U. S. Motor for June delivery into Ohio.

Local resale agents reported there were only one or two places in Oklahoma where U. S. Motor gasoline could be obtained under 7.50 cents and in some cases refiners were asking 7.625 cents for resale purposes.

The price advance of the past few weeks appeared once to have come to a temporary standstill for, as the week advanced 58-60 U. S. Motor gasoline seemed pegged at 7.50 cents. However, by Saturday, several sellers advanced their prices and a good number of sales were reported at 7.625 cents. One or two sellers obtained as high as 7.75 cents for their U. S. Motor Saturday.

Higher gravity gasolines showed considerable strength. Domestic demand was quiet in most quarters but heavy export buying of the past few weeks left most refiners in excellent shape on these grades. Prices were unchanged over most of the week and advanced approximately .125 cent on Saturday.

The 60-62, 437 e.p. gasoline sold mostly at 7.625 cents flat Saturday after moving at 7.50 to 7.625 cents previously. Some sales were made at 7.50 cents Saturday and some were reported at 7.875 cents. Gasoline of 60-62, 400 e.p. opened Monday at 7.625 to 7.75 cents and sold thereafter at 7.75 cents flat. The 64-66, 375 e.p. grade sold at 7.875 to 8 cents most of the week and closed Saturday at 8 to 8.125 cents.

Kerosene demand was lighter this week in the Chicago market as a whole. A few of the trade reported a consistent demand coming mostly from Wisconsin, Minnesota and the Dakotas where the plowing season is late. Most sellers reduced their prices .125 cent at some time during the week. Practically all of the local trade were asking 5.25 cents for 41-43 w.w. kerosene Saturday. The bulk of sales earlier in the week were at 5.25 to 5.375 cents.

Demand for distillate continued practically unchanged. Most sellers reported a few inquiries in the market and prices about the same as at the close of last week. The bulk of sales of 38-40 straw distillate were at 3 to 3.125 cents.

Little change was apparent in the gas oil situation this week. Demand was not heavy but prices showed only slight signs of easing off. Reports from the trade indicated that refiners were not anxious to move their gas oil, preferring to hold it for cracking purposes.

Most sellers were getting 2.625 cents for their 32-36 ordinary dark gas oil, with some sales at 2.50 cents reported. Gas oil of 32-36 gravity with a zero cold test continued to sell mostly at 2.75 to 2.875 cents, while the 32-36 straw zero sold at 2.875 to 3 cents.

Fuel oil prices were lowered again this week. Declines of 2.50 to 5 cents a barrel were made on the various grades. Spot demand was quiet. Several sellers reported they have enjoyed a consistent demand from industrial concerns. Several sales of 18-22 fuel oil for delivery over June, July and August at $0.725 and $0.75 were reported.

A considerable number of sellers refused to quote over so long a period, concentrating their efforts on sales over June. Most sales of fuel oil over June, were reported at prevailing market prices or slightly below.

Fuel oil of 28-30 gravity opened Monday at $0.925 to $0.975 and sold over the rest of the week at $0.90 to $0.975. The 24-26 fuel moved at $0.80 to $0.825 Monday, at $0.775 to $0.825 Tuesday, at $0.775 to $0.80 Wednesday and Thursday and was at $0.75 to $0.80 Saturday. The 22-26 fuel was at $0.775 to $0.825 Monday and Tuesday and at $0.75 to $0.80 thereafter. Fuel of 18-22 gravity was unchanged over the week at $0.725 to $0.775. Some sales of higher sulfur west Texas 18-22 fuel were reported at around $0.70. Smackover treated fuel continued to move at $0.85 to $0.90.

Much unsettled weather in Standard of Indiana territory next week with rather frequent precipitation.

PLATT'S
OILGRAM
Petroleum Markets-Every Day

HOW SURE ARE YOU?

If you were to place an order *today* for gasoline, or kerosene, or fuel oil, or lubricating oil—

How sure would you be that you were buying *at the right time* and *at the actual market?*

Did you hear of a tankwagon cut today in another territory, which might indicate a cut coming in yours? Or, did crude change today? Or, did some one put in a big buying order for export which will stiffen the gasoline market ¼ cent or so tomorrow?

A large part of your profits come from *daily accurate knowledge* of market prices and conditions.

PLATT'S OILGRAM brings you this market information from an unbiased source daily. Costs only 30 cents a day—a year for $75, or 3 months for $25. It's your greatest aid to showing PROFIT at the end of the year.

TULSA—904 World Bldg.
CHICAGO—35 E. Wacker Drive
NEW YORK—342 Madison Ave.
CLEVELAND—744 Penton Bldg.

Tanker Rates

NEW YORK, May 28.—Approximate tanker freight rates in the following trades are, to Continental ports, in shillings per ton of 2240 pounds, British Sterling; to American ports, cents per barrel:

	Crude &/or Fuel	Refined Oil
Calif. to U.K. or Continental ports*	29/-	32/6
Gulf to U.K. or Continental ports*	16/6-	19/6
North Atlantic to U.K. or Continental ports*	13/6	16/6
Calif. to North Atlantic ports (not E. of N.Y.)	57c	85/90
**Gulf to North Atlantic ports (not E. of N.Y.)	18c	37c

*Continental ports in the range between Bordeaux and Hamburg, both inclusive.

**For Venezuela loading 1c per bbl. additional. For Tampico loading, 4c per bbl. additional.

Producers & Refiners Corp. Earnings Shrink

CLEVELAND, May 26.—The report of the Producers & Refiners Corp., and subsidiaries, which are controlled by the Prairie Oil & Gas Co., shows a $6,000,000 shrinkage in gross earnings to $14,002,430 last year and a loss of $4,044,304 before depletion but after depreciation and amortization charges.

Assets totaled $56,305,137, of which the property account was $49,376,528 after depreciation. Current liabilities Dec. 31 exceeded current assets by approximately $1,000,000.

The company has not paid dividends on the preferred stock since the first half of 1925. These dividends are accruing at the rate of $199,174 a year.

Paragon to Vote on Plan To Revamp Capital

TOLEDO, May 26.—A plan for the reorganization of the capital structure of the Paragon Refining Co. will be submitted to a special meeting of stockholders, June 12, in Cincinnati. It is planned to alter the structure so that accrued dividends on the preferred stock, amounting to $3,788,988, will be wiped out and payments resumed on the outstanding preferred.

The reorganization plan was worked out by a committee, which was appointed at the annual meeting several weeks ago in Toledo.

Fisher Brothers Buy Into Texas Corp.

NEW YORK, May 26.—Large investments of the Fisher brothers of Detroit, automobile body manufacturers, in The Texas Corp. were revealed this week by the election to The Texas board of William A. Fisher, president of the Fisher Body Co. He succeeds Thomas A. O'Donnell, Los Angeles, former president of the American Petroleum Institute, and chairman of the California Petroleum Corp., which recently has been consolidated with The Texas Corp.

Fisher brothers' purchases of Texas stock is understood to have been made in the open market. It was rumored in financial circles that the Fishers had acquired the holdings of the John W. Gates interests, but the rumors are now regarded as inaccurate.

Fisher brothers have lately become interested in the Mexican Seaboard Oil Corp. and have two representatives on its board.

Wholesale Gasoline Market Off in California

LOS ANGELES, May 26

ANOTHER gasoline price war among refiners was narrowly averted this week when two companies started offering larger margins to resellers in an effort to build up their gallonage. Other companies were being drawn into the matter, but, on May 25, differences were settled and the larger margins withdrawn, it is understood.

It is said one company was offering to take over leases to stations and then to release them to operators at a nominal fee, in addition to allowing them a five-cent margin under the retail price on their gasoline purchases. Most companies are now allowing a four-cent margin to resellers.

Tank car gasoline is off approximately one-half to three-quarters cents during the past week. In a few instances, some gasoline has moved out of the state at as low as 8.25 cents, but most of this movement is at 8.50 to 9 cents. Shipments to points within the state are moving from 10 to 12.50 cents, according to local conditions.

In the export market, U. S. motor can be bought at 8 cents and it is understood that some of this product might be purchased as low as 7.50 cents. Buyers apparently are not willing to pay as much as 8 cents, as the tanker rate slightly exceeds 2 cents and would leave them no profit on a resale on the east coast.

Fuel oil in tank cars still holds around 70 to 85 cents a barrel, according to how badly the refiner wants to sell. One contract was made this week at 75 cents for a fairly large quantity to move in tank cars over a period within this trade territory, but spot purchases can be made around 70 cents in smaller quantities.

There is nothing doing in the export fuel oil market, with quotations continuing at 75 cents and up. As far as could be learned, no contracts were placed last week.

Natural gasoline was slightly weaker, with quotations for spot sales revised downward about half a cent. Some of this product was sold recently at 8 cents spot movement and rumors were current that a few cars of distress stuff had been offered at 7.50 cents.

There were no changes in other products.

* * *

Los Angeles Shipments

LOS ANGELES, May 25.—Tankers leaving Los Angeles harbor week ended May 19 for points outside of Pacific coast trade territory, carried total of 1,444,940 barrels of petroleum products, or a daily average of 206,420 barrels, compared with previous week's total of 1,041,463 barrels of a daily average of 148,780 barrels.

Total movement included 42,326 barrels of crude, 394,293 barrels of fuel, 821,395 barrels of gasoline, 11,975 barrels of diesel, 95,838 barrels of kerosene and 79,113 barrels of gas oil. Products going to Pacific foreign included 42,326 barrels of crude 276,829 barrels of fuel, 120,187 barrels of gasoline, 11,975 barrels of diesel and 95,838 barrels of kerosene.

Atlantic domestic absorbed 314,078 barrels of gasoline and 79,113 barrels of gas oil. Atlantic foreign shipments included 387,130 barrels of gasoline and 117,464 barrels of fuel.

Financial Notes

Beacon Oil Co.—R. B. Kahle, president, reports that in the first quarter of 1928 gasoline sales increased 40 per cent and motor oil sales 60 per cent over the company's sales in the first quarter of 1927, but a loss of $408,920 was suffered compared with a profit of $58,142 in the first quarter of 1927.

Indian Refining Co.—Thomas Coyne of the firm of Alfred L. Baker & Co., Chicago, has been elected a director.

Buckeye Pipe Line Co.—All retiring directors were re-elected at annual meeting. Subsequently all officers were re-elected.

Sinclair Consolidated Oil Corp.—Directors have elected three new vice-presidents: J. W. Cairns, W. L. Connelly, and W. H. Ison. Other officers except G. T. Stanford, general counsel, who retired as vice-president, were re-elected.

Amerada Corp.—Allmand M. Blow has been elected vice-president and director. He has been appointed manager of the Amerada Petroleum Corp. to succeed John M. Lovejoy who resigned.

60,000 Richfield Shares Taken

LOS ANGELES, May 25.—Preferred stock purchase warrants and note warrants of the Richfield Oil Co. have been exercised to the extent of 60,000 shares of common stock. Purchases of the stock has increased the company's cash by more than $1,500,000. All obligations of the company are strictly current, J. A. Talbot, president, has announced. All bank loans have been liquidated.

Transactions in Oil Shares on New York Stock Exchange

1927 High	1927 Low	1928 High	1928 Low	Listed Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended May 26 Sales	First	High	Low	Last	Change
7 3/8	27 3/4	38	27 1/8	(sh) 922.075	N.P	Amerada Corp.	50cQ	Apr. 30, 28	13,500	35 3/8	35 7/8	34 3/4	34 7/8	— 5/8
82 1/2	35 1/8	85	51 1/4	(sh) 209.180	N.P.	American Republics Corp.	.....	.....	13,100	74 7/8	77 1/8	73 1/4	75 1/4	— 1 3/8
50 1/4	35	46 1/2	37 1/2	$56.000.000	$ 25	Associated Oil	50cQ	Mar. 31, 28	50	44	44	43 1/2	43 1/2	— 1/8
131 3/8	104	139 7/8	95 3/4	50,000,000	100	Atlantic Refining	$1Q	Mar. 15, 28	32,100	126	133	124 1/4	129 1/2	+ 3 3/4
119	115 1/2	118 1/4	116	20,000,000	100	do pfd	$1.75Q	May 1, 28	200	118	118	117 7/8	118	+ 1/8
35 1/2	20 3/4	26 7/8	22 1/8	28,725,675	25	Barndsdall Corp. A	.....	Feb. 6, 28	19,300	24 1/4	24 5/8	23 5/8	23 3/4	— 5/8
32 1/2	20 1/2	27 1/4	22	799,775	25	do B	.....	Feb. 6, 28	100	23 1/2	23 1/2	23 1/2	23 1/2	— 1/2
32 7/8	20	32 3/4	24	$1,524,150	25	California Petroleum	25cQ	June 1, 28	3,800	31 3/4	*32 3/4	31 3/4	32 3/4	+ 1/2
96 3/4	65	94 7/8	71 1/4	20,785,400	100	General Asphalt	.....	.....	18,100	88	89 7/8	85 3/4	87 1/2	— 1/4
144 7/8	107 1/4	141 1/2	114	6,792,200	100	do pfd	$1.25Q	June 1, 28	200	131	131	130	130	— 7 3/4
175 3/4	60 1/8	167	127	25,000,000	100	Houston Oil	.....	.....	36,400	142 3/4	157	139 3/4	149 1/2	+ 6 1/2
32 3/4	17 5/8	31 7/8	21 3/4	(sh) 500.000	N.P.	Independent Oil & Gas	25cQ	May 7, 28	7,300	27 1/8	28 3/4	26 7/8	27 7/8	0
12 1/8	7 3/8	19 1/2	9	$3,280,340	$10	Indian Refining	.....	Dec. 15, 20	17,300	17 7/8	18 3/8	16 1/2	17 7/8	+ 3/8
12	7 1/4	18 7/8	8 1/2	4,550,110	10	do ctfs	.....	.....	21,700	16 3/4	17 3/8	16 7/8	17 1/4	+ 5/8
112	99	132	101	2,296,400	10	do pfd	.....	Dec. 15, 21	1,300	130 1/4	*132	130	130 1/4	— 3/4
37 3/4	20 1/2	39 1/4	27 3/8	(sh) 3,992.122	N.P.	Lago Oil & Transport	75cQ	May 1, 28	3,900	35	36 1/2	35	35 1/2	+ 3/8
18 1/8	10	19 3/4	9 3/8	(sh) 1,237.078	N.P.	Louisiana Oil Refining	.....	.....	23,100	16	16 1/2	15	15 3/8	— 3/8
97	85 1/4	96	80	$4,000.000	$100	do pfd	$1 3/4Q	May 15, 28	50	93	93	92 3/4	92 3/4	+ 3/8
22 3/4	12	25 1/2	12 1/2	(sh) 330,000	N.P.	Maracaibo Oil	.....	.....	5,400	19 1/2	20 1/4	18	19 1/4	+ 1/4
58 1/2	31	44 1/2	33	(sh) 2,316.692	N.P.	Marland Oil Co.	.....	Mar. 31, 27	25,200	38 7/8	39 3/4	38 1/4	39 1/2	+ 1/2
320	200	360	255	$45,942,800	$100	Mexican Petroleum	$3Q	Apr. 20, 28	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	12,000,000	100	do pfd	$2Q	Apr. 20, 28	.....	.....	.....	.....	.....	.....
9 1/4	3	39	4 5/8	(sh) 945,939	N.P.	Mexican Seaboard	.....	Nov. 15, 24	130,500	32 1/4	34 7/8	30	33 1/2	+ 3/4
39 1/8	25 1/2	33 1/4	25 1/8	(sh) 1,357,461	N.P.	Mid-Continent Petroleum	.....	Aug. 1, 27	18,400	31	32 3/8	30 5/8	32 1/4	+ 1 1/8
105	97	115 1/8	103 1/4	$6,718,000	$100	do pfd	$1.75Q	Mar. 1, 28	1,300	114	114 7/8	114	114 7/8	+ 1 1/4
3 1/4	1 3/8	7 3/8	2 3/8	24,298.850	10	Middle States	.....	July 1, 23	56,000	5 7/8	6 1/4	5 1/2	5 3/4	— 1/4
2 3/4	1 1/8	5 7/8	1 1/2	5,501.370	10	do ctfs	.....	.....	3,000	4 1/2	4 3/4	4 1/4	4 1/2	+ 1/8
1 7/8	1	2 1/4	1 1/4	(sh) 3,500,000	N.P.	Pacific Oil	.....	.....	5,900	1 5/8	1 3/4	1 1/2	1 1/2	— 1/8
65 7/8	40 1/2	53 3/4	38 1/4	$48,807.400	$ 50	Pan American P. & T.	.....	Oct. 20, 27	2,200	48	48 3/4	47	48	0
66 3/8	40 1/4	54 5/8	37 3/4	121,097,900	50	do B	.....	Oct. 20, 27	9,200	49 1/2	50 3/4	47 1/4	50	+ 1/2
37 7/8	16 3/4	28 3/8	18 1/4	(sh) 400,000	N.P.	Pan American Western B.	.....	Jan. 30, 27	5,100	24 7/8	24 7/8	23 1/8	23 1/2	+ 5/8
18 7/8	8	21 3/4	11 1/2	(sh) 198,770	N.P.	Panhandle P. & R.	.....	.....	5,000	18 1/2	20	18 1/8	18 1/8	— 3/4
83	54	106 1/4	70	$2,935,200	$100	do pfd	.....	July 2, 23	100	89	89	89	89	— 4
60 1/4	36 1/4	44 5/8	35 1/4	(sh) 2,406,796	N.P.	Phillips Petroleum	37 1/2cQ	Apr. 2, 28	13,400	41 1/8	42 1/2	41	41 3/4	+ 1/4
1 3/8	1/2	4 1/4	1/2	$29,622,925	$ 25	Pierce Oil Corp.	.....	.....	23,600	3 3/8	3 1/2	3	3	— 1/2
24	13 1/2	30 1/2	16 1/4	15,000,000	100	do pfd	.....	Feb. 1, 22	200	23 1/2	23 1/2	23 1/4	23 1/4	+ 1/8
5 1/2	2 1/2	6 5/8	3 1/2	(sh) 2,500,000	N.P.	Pierce Petroleum	.....	.....	5,600	4 3/4	4 7/8	4 5/8	4 3/4	0
33 7/8	16 3/4	26 1/8	16	$37,450.850	$50	Producers & Refiners	.....	Sept. 15, 23	3,600	23	24 3/8	22 3/4	23	0
50	36 3/8	46 3/4	41	2,845.350	50	do pfd	.....	May 1, 25	50	45	45	44 1/8	44 5/8	+ 5/8
33 1/2	25	27 1/2	19	75,959.250	25	Pure Oil Co.	12 1/2cQ	June 1, 28	13,900	24	24 1/8	23 3/8	23 5/8	— 1/4
115 1/2	111 3/4	115	108	13,000.000	100	do 8% pfd	$2Q	Apr. 1, 28	110	115 3/4	115 3/4	113 1/2	114 1/2	+ 1
28 5/8	25 1/8	48 7/8	24	$29,224,894	$25	Richfield Oil	25cQ	May 1, 28	66,200	52	52	47 1/4	48 7/8	— 1 3/8
54 1/2	44 1/4	55	44 3/4	(sh) 611,303	13.40	Royal Dutch, N. Y. shares	$1.343	Jan. 28, 28	7,800	52 1/4	52 7/8	50 1/4	52 1/2	— 3/4
47 1/4	41 3/4	47	40 3/8	(sh) 77,590	£2	Shell Transport & T.	97c	Jan. 23, 28	.....	.....	.....	.....	.....	.....
31 3/4	24 5/8	31	23 1/4	(sh) 10,000.000	N.P.	Shell Union Oil	35cQ	Mar. 31, 28	32,700	28	28 3/4	27 1/8	28	— 3/8
26 3/8	14 1/4	24 3/4	18 1/8	$7,208.080	$ 10	Simms Petroleum	.....	Apr. 1, 27	5,500	22 1/8	23	22	22 1/2	0
22 3/8	15	30 1/4	17 3/8	(sh) 4,501.915	N.P.	Sinclair Consolidated	.....	May 31, 24	136,700	26 7/8	28	24 1/2	26 7/8	— 1/2
104 1/2	97	109 1/2	102 1/2	$16,604,600	$100	do pfd	$2Q	May 15, 28	700	108	108 7/8	108	108 7/8	0
37 3/8	24 1/8	34	25	27,396,590	25	Skelly Oil Co.	50cQ	Mar. 15, 28	10,700	30 5/8	31 3/4	30 1/4	30 3/4	— 1/4
60 3/4	50 1/8	63 7/8	53	(sh) 13,016,434	N.P.	S. O. California	62 1/2cQ	Mar. 15, 28	10,700	59 1/4	60 3/4	58 1/2	60 1/4	+ 1 1/4
41 3/8	35 1/8	49	37 3/4	$607,910,525	$ 25	S. O. New Jersey	‡25cQ	Mar. 15, 28	142,600	44 1/4	46 3/4	43 1/4	46 1/4	+ 1 1/4
34 1/2	29 3/4	41 1/2	28 3/4	427,973,275	25	S. O. New York	40cQ	Mar. 15, 28	111,900	37 1/4	38 1/8	36 1/4	37 3/8	+ 5/8
34 7/8	30	49	31 3/4	(sh) 1,206.073	N.P.	Sun Oil	25cQ	Mar. 15, 28	1,700	45 3/4	46	44 7/8	46	— 1/2
101 3/8	99	109 1/4	100	$5,000.000	$100	do pfd	$1.50Q	June 1, 28	100	109	109	109	109	— 1/2
6 1/2	3 1/8	9 1/2	2 1/2	(sh) 1,121,368	N.P.	Superior Oil Corp.	.....	Dec. 20, 20	51,700	8 3/4	8 3/4	6 3/4	7 3/4	— 1
58	45	66 3/8	50	$180,480.550	$ 25	The Texas Corp.	75cQ	Apr. 2, 28	211,600	64 1/2	*66 3/8	63	64 1/2	+ 1/8
18 7/8	12	17 1/2	12 1/2	8,380,340	10	Texas Pacific Coal & Oil	.....	Jan. 3, 28	16,600	15 1/8	15 7/8	14 3/8	15 1/8	— 3/8
29 1/8	19	27 1/8	19 1/8	(sh) 2,168,410	N.P.	Tide Water Oil Co.	20cQ	Mar. 31, 28	500	26	26	24 1/4	24 3/4	— 1 3/4
90 1/8	85	94 1/2	87	$20,705,200	$100	do 5 1/2% pfd	$1.25Q	May 15, 28	600	93	93	92	92 3/4	— 3/4
19 1/4	15 3/4	20 3/8	14 3/4	(sh) 4,796,158	N.P.	Tide Water Associated	.....	Aug. 1, 27	25,000	18	19	17 1/2	18 1/2	+ 3/4
90 3/4	85	90	82 1/8	$72,745,900	$100	do pfd	$1.50Q	Apr. 2, 28	500	89 1/4	89 1/4	88 3/8	88 5/8	— 3/8
10 3/8	3 3/4	10 1/8	7 1/4	(sh) 3,742.029	N.P.	Transcontinental Oil	.....	.....	41,900	8 1/2	8 7/8	8 1/4	8 3/8	— 1/8
56 1/2	39 3/8	57	42 3/4	$40,791.225	$ 25	Union Oil of California	50cQ	May 10, 28	10,900	51 3/8	53 3/8	50 5/8	51 3/4	+ 1/8
127 1/2	94	128 1/8	119 1/2	30,844.000	100	Union Tank Car Co.	$1.25Q	June 1, 28	.....	.....	.....	.....	.....	.....
34 1/2	24 1/2	33 1/2	26	(sh) 310,956	N.P.	Warner Quinlan	50cQ	Apr. 1, 28	11,600	31 1/8	31 3/4	31	31 1/8	— 1/2
27 1/2	20	26	20 1/8	(sh) 490.000	N.P.	White Eagle Oil & Refining	25cQ	Apr. 20, 28	2,200	24 1/4	24 7/8	24	24 1/4	+ 1/4

*New High †New Low ‡Also extras s-Stock Total Sales 1,439,660

Pittsburgh Stock Exchange

1927 High	1927 Low	1928 High	1928 Low	Par Value	Stocks	Transactions Week Ended May 25 Sales	First	High	Low	Last	Change
9 7/8	6 7/8	9 1/2	7 1/2	$ 10	Ark. Nat. Gas (new)	16,640	2 3/4	3	2 1/2	3	.....
.....	.....	3	2 1/2	N.P.	do pfd	6,776	6 7/8	7	6 3/4	7	.....
98 3/4	80 7/8	97 3/4	90 3/4	100	Columbia Gas	.....	.....	.....	.....	.....	.....
107 7/8	100	108	108	100	do pfd	.....	.....	.....	.....	.....	.....
15	7 1/2	10	7	10	Devonian Oil	35	9	9	9	9	0
.....	.....	15	9 3/4	10	Dixie Gas & Util.	1,035	13	14	13	14	+ 2
.....	.....	95	85	100	do pfd	.....	.....	.....	.....	.....	.....
117 1/2	115	116	115	100	Duquesne Light pfd.	.....	.....	.....	.....	.....	.....
.....	.....	85	80 1/2	100	Fayette County Gas.	.....	.....	.....	.....	.....	.....
12 1/4	6	22	12	N.P.	Houston Gulf Gas	4,929	52	52	50 1/2	51	— 1/2
59 1/4	37 1/4	58	48 5/8	$ 25	Lone Star Gas	.....	.....	.....	.....	.....	.....
.....	.....	36 1/2	36 1/2	25	Petroleum Exploration	.....	.....	.....	.....	.....	.....
3 7/8	3	4	3 1/4	5	Pittsburgh Oil & Gas	.....	.....	.....	.....	.....	.....
8	5 1/2	7 1/4	6 3/8	10	Salt Creek Cons.	150	6 1/2	6 1/2	6 1/4	6 1/4	— 1/4
26 1/2	17	22	16 3/4	10	Tidal Osage	.....	.....	.....	.....	.....	.....
43	33	33 1/4	30 1/2	N.P.	Waverly Oil Wks. A	60	33	33	33	33	0
.....	.....	19	19	$ 25	Wiser Oil	.....	.....	.....	.....	.....	.....

Pittsburgh Curb Exchange

1927 High	1927 Low	1928 High	1928 Low	Par Value	Stocks	Transactions Week Ended May 25 Sales	First	High	Low	Last	Change
.....	.....	9 3/8	9	10	Ark. Nat. Gas (old)	1,100	9	9 3/8	9	9 1/4	.....
.....	.....	3 1/4	1 3/4	....	Arkansas Gas Corp.	.....	.....	.....	.....	.....	.....
.....	.....	9	6 1/2	....	do pfd	.....	.....	.....	.....	.....	.....
95	88	132	132	25	Gulf Oil	.....	.....	.....	.....	.....	.....
.....	.....	115	115	....	Houston Gulf Gas pfd.	.....	.....	.....	.....	.....	.....
10 3/4	5 1/2	9	5 1/2	25	Leonard Oil & Dev.	2,350	7 7/8	8	7 5/8	8	+ 1/2
2.70	.30	1.00	.50	10	Omar Oil & Gas	.....	.....	.....	.....	.....	.....
2 1/4	1 3/4	.....	.....	5	Pittsburgh Oil Dev.	.....	.....	.....	.....	.....	.....
31	19	22	16 3/4	5	Plymouth Oil	579	20 1/2	20 1/2	20	20	— 1/4
6	5	4 1/2	4 1/2	5	States Oil	.....	.....	.....	.....	.....	.....
3 1/8	1 1/2	4 1/2	2 1/4	1	Texon Oil & Land	1,500	4	4	4	4	0
23 3/4	18	18	15	.10	Tidal Osage Non-vgt.	.....	.....	.....	.....	.....	.....

*New High †New Low x Ex Dividend

Oil Company Earnings

First Quarter	1928	1927
Beacon Oil Co.	*$408,920	$58.142
California Pet.	252,416	1,032,627
Derby Oil & Refg.	1,178	.....
Annual	**1927**	**1926**
Producers & Refiners.	*3,044,304	133,343

*Lost

Oil Dividends

	Amount	Stock of Record Payable	Record
Nat'l Transit q.	25c	June 15	May 31
do special	87	June 15	May 31
Shell Union q.	35c	June 30	June 4
South Penn q.	50c	June 30	June 14
S. O. Ohio q.	62 1/2c	July 2	June 8
Swan-Finch	30c	June 30	June 1

Cleveland Stock Market

May 25	Par Value	Bid	Asked	Last Sale
Canfield Oil	100	110 1/2	...	112
do pfd	100	100	...	100
Fred G. Clark	10	3 1/2	4 3/4	4 1/2
National Refining Co.	25	37	37 1/2	37
do pfd	100	130	135	130
Paragon Refining Co.	25	13 1/4	13 5/8	14
do pfd	100	121	130	130 3/4

Standard Oil Stocks on New York Curb

1927 High	1927 Low	1928 High	1928 Low	Outstanding Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions Week Ended May 25 Sales	First	High	Low	Last	Change
21⅝	17⅜	22⅝	18½	£ 4,126,460	£ 1	Anglo-American Oil	60⅓c	May 31, 27	1,900	19¼	19½	19	19⅜	0
21½	17⅝	20½	17⅞	.....	£ 1	do cts. non-voting	.....	.....	400	18⅛	18½	18⅛	18½	— ⅛
3¾	¾	5	1¼	(sh) 500,000	N.P.	Atlantic Lobos	.....	.....	2,400	3⅞	3⅞	3	3	— 1⅛
6½	2½	9¾	3¼	$ 10,000,000	$ 50	do pfd	.....	.....	700	7	7	6	6	— 2
69	50	56	49	1,000,000	25	Borne Scrymser	‡$1S.A.	Apr. 16, 28	150	54½	54½	53	53	+ 2
60	45	76	58	10,000,000	50	Buckeye Pipe Line	$1Q	Mar. 15, 28	400	67	69	67	68½	+ 3
126	76½	161	117¼	3,000,000	25	Chesebrough Mfg	$1Q	Mar. 30, 28	.....	.....	.....	.....	.....	.....
22⅝	16¼	23	16	36,057,840	10	Continental Oil	.....	Dec. 15, 27	6,000	18½	18⅝	18	18½	— ¼
137	89	114	88	3,000,000	100	Cumberland Pipe Line	$2Q	Mar. 15, 28	350	111	111	109	109	— 2¼
68¼	47	88	64½	5,000,000	100	Eureka Pipe Line	$1Q	May 1, 28	100	82	82	82	82	— 2½
13½	3½	11	5	16,000,000	100	Galena Signal Oil	.....	June 30, 25	800	6¾	6¾	5½	5⅝	— 2⅛
59¾	23	39	27	4,000,000	100	do new pfd	.....	June 30, 26	.....	.....	.....	.....	.....	.....
60½	35½	48	35	2,000,000	100	do old pfd	.....	June 30, 26	30	45	45	45	45	0
68½	54	84¾	60	73,117,577	25	Humble Oil & Refining	‡30cQ	Apr. 1, 28	28,400	82⅜	83⅜	79⅝	83	+ ¾
182	123¾	245	176½	20,000,000	100	Illinois Pipe Line	$6S.A.	Dec. 15, 27	1,550	239¾	240	235	237½	— ½
64¾	37¾	71⅞	56¾	(sh) 6,458,267	N.P.	Imperial of Canada	‡25cQ	June 1, 28	4,300	68	69	66¾	68	— ½
94½	61	89½	74⅛	$5,000,000	$ 50	Indiana Pipe Line	$1Q	May 15, 28	100	86	86	86	86	— 1⅜
39	28¼	45¼	35	(sh) 17,123,444	N.P	International Petroleum	25c	Mar. 15, 28	27,800	42½	43	41¼	41⅞	— 1
24	13¾	32⅜	20½	$6,363,350	12.50	National Transit Co	25cQ	Mar. 15, 28	8,200	32	*32⅜	31	32	+ ½
44½	31¼	59⅛	37½	5,000,000	100	New York Transit	.....	July 15, 26	250	58	58	54	55	— 3
100	70	125	94	4,000,000	100	Northern Pipe Line	‡$3S.A.	Jan. 1, 28	250	118	118	117	117	— 3
67⅛	52	68¼	58	60,000,000	25	Ohio Oil Co	‡50cQ	Mar. 15, 28	3,900	65⅛	65¼	64¼	64¼	— ¾
39	12	84	29	10,000,000	25	Penn Mex. Fuel	$1.25	May 31, 28	2,700	48	55⅞	48	53⅛	+ 5⅛
190	132	223	184	81,000,000	100	Prairie Pipe Line	$2.50Q	Apr. 30, 28	400	214	214	213	214	+ ¼
55½	45⅜	56	47⅜	60,000,000	25	Prairie Oil & Gas	.....	Aug. 31, 27	22,000	52⅜	52½	51⅝	52	— ½
201½	175½	186	167	4,000,000	100	Solar Refining	$5S.A.	Dec. 20, 27	100	180	180	180	180	+ 1
27¼	15½	35⅞	21	5,000,000	50	Southern Pipe Line	$2	Dec. 1, 27	100	33	33	33	33	— 2½
41¼	35	53	36¾	20,00,000	25	South Penn Oil	50cQ	Mar. 31, 28	4,000	46¼	49	46	47¾	+ 1¼
83	55½	100	70	3,500,000	100	South West Pa. Pipe Lines	‡$1Q	Apr. 2, 28	50	98	98	98	98	— 1⅜
81½	64⅜	83⅝	70⅞	228,415,463	25	S. O. Indiana	‡62½cQ	Mar. 15, 28	21,500	78⅛	79⅜	77⅛	79	— ⅛
20⅞	14⅜	27¾	15	8,000,000	25	S. O. Kansas	.....	June 16, 24	2,500	22	23¼	21¾	23	+ ½
130	111½	136⅛	122¼	17,012,559	25	S. O. Kentucky	$1Q	Mar. 31, 28	5,600	130	132⅛	128	130	— 1
49¼	40	45⅞	39⅞	4,559,850	25	S. O. Nebraska	63cQ	Mar. 20, 28	700	43	43	43	43	— 1
87½	72	79½	71	14,000,000	25	S. O. Ohio	62½cQ	Apr 2, 28	550	76¼	76½	75½	76	+ ⅛
122	117¼	125	117	7,000,000	100	do pfd	$1.75Q	June 1, 28	160	120	120	120	120	0
21	14½	26	16	30,734,000	25	Swan Finch Co	.....	Nov. 1, 19	.....	.....	.....	.....	.....	.....
.....	.....	87⅛	75	124,941,600	25	Vacuum Oil	75cQ	May 31, 28	10,200	82¾	82¾	80	81⅝	— 1⅜

*New high †New low xEx dividend ‡Also extras.

New York Curb Bonds

Week Ending May 25

	High	Low	Last	Ch'ge
Beacon Oil 6s '36	105½	104½	105½	0
Cities Serv. 5s '66	97¾	97½	97¾	— ⅛
Cities Serv. 6s '66	107½	104	104	0
Cities Serv. G 5½s '42	96¼	95½	95⅞	— ⅛
Cities Serv. G. 6s '43	100¾	100	100	— ¾
Cont. Oil 5¼s '37	97⅜	96½	97	0
Emp. O & R 5½s '42	95¼	94⅜	94½	— ½
Galena Oil 7s '30	98	95⅛	97	+1¾
Gulf Oil 5s '37	101¾	101	101½	+ ¼
Gulf Oil 5s '47	102½	101½	101½	+ ¼
Independent Oil 6s '39	104⅝	103	103	— ⅞
Richfield Oil 6s '41	148¼	138	138	—13¾
Sun Oil 5½s '39	101⅝	101	101¼	— ¾
Trans. Con't. Oil 7s '30	106	105	105	— ¼
Warner Quinlan 6s '42	106⅞	104¼	104¼	— ⅛

New York Bonds

Week Ending May 25

	High	Low	Last	Ch'ge
Assoc. Oil gold 6s	103	102⅜	102½	— ¼
Atlantic Refg. deb. 5s	102	102	102	0
Barnsdall Corp. 6s	104⅛	102½	103⅜	— ⅜
Barnsdall Corp. 8s ex-war	93	92	92¼	— ¾
Cal. Pet. 5s	100¾	100⅜	100⅜	— ⅜
Cal. Pet. 5½s	102¾	102¼	102¼	— ⅜
General Asphalt 6s	111¼	111	111	—1
General Petroleum 5s	101⅞	101⅝	101⅝	— ¼
Humble Oil & Refg. 5½s	102⅝	102	102	— ⅜
Humble Oil & Refg. 5s	100¾	100	100	— ½
Mid-Continent Pet. 6½s	.....	.....	.....	.....
Pan Amer. P & T 7s	104⅜	104½	104⅝	+ ⅛
Pan Amer P & T 6s	104¼	103	103½	—1
Pan Amer P & T 6s	96	95½	95½	— ½
Pierce Oil deb. 8s	105¼	104¾	104¾	+ ¼
Prod. & Refg. 8s	110⅞	110¾	110¾	0
Simms Pet. cvt. 6s	105	105	105	0
Sinclair Con. Oil 7s	102⅞	102	102¼	— ⅝
Sinclair Con. Oil 6½s	100½	99⅞	100	— ⅜
Sinclair Con. Oil 6s D	98¾	98⅝	98¾	0
Sinclair Con. Crude 5½s	99¾	98½	98⅜	— ⅜
Sinclair Pipeline 5s	96	93⅜	94	— ¾
Skelly Oil 5½s	94¾	94⅛	94⅛	— ⅝
S. O. N. Y. 4½s	98	97⅛	97½	— ½
S. O. N. J. deb. 5s	103⅜	103⅛	103¼	0
Superior Oil 7s	110	110	110	0
Union Oil of Calif. 6s A	111½	111½	111½	— ½
Union Oil of Calif. 5s C	100⅛	99¾	100⅛	+ ⅜
White Eagle 5½s	97¾	97¼	97¼	— ½

Independent Oils on New York Curb

1927 High	1927 Low	1928 High	1928 Low	Par Value	Stocks	Transactions Week Ended May 25 Sales	First	High	Low	Last	Change
2⅛	.55	1½	.75	$ 5	Amer. Con. Oilfields	25,400	1¼	1¼	1	1⅛	— ⅛
7½	2¾	6⅝	3½	N.P.	Amer. Maracaibo	33,700	6⅛	6¼	5¾	6¼	+ ⅛
2¾	1	4	2¼	$ 10	Argo Oil	100	3	3	3	3	0
9¾	6¾	9⅞	7⅝	10	Arkansas Nat. Gas	1,400	8½	9⅜	8½	9¼	— ¼
20½	15½	.....	.....	N.P.	Beacon Oil	.....	.....	.....	.....	.....	.....
40	20½	40½	32¾	N.P.	British American	.....	.....	.....	.....	.....	.....
28¼	15½	23⅞	18½	25c	Carib Syndicate(new)	2,700	20¾	20¾	19⅛	20⅛	— ⅛
26	15⅛	.....	.....	.....	do ctfs. of deposit	.....	.....	.....	.....	.....	.....
58¾	40¼	69½	54	$ 20	Cities Service	67,500	69⅛	*69½	66⅝	68	— 1⅜
95⅜	87	103½	94½	100	do pfd	2,100	103	103¼	102⅝	103	— ⅛
8⅞	7⅜	9⅝	8⅞	10	do pfd. B	300	9⅝	9⅝	9⅝	9⅝	0
29¼	22½	34⅝	28¼	10	do banker's shares	.....	.....	.....	.....	.....	.....
3⅞	1⅜	2¼	1⅛	1	Colombia Syndicate	8,400	1½	1⅝	1⅜	1⅜	— ⅛
9¾	6⅜	8⅛	6½	10	Consolidated Royal	200	7¼	7¼	7¼	7¼	— ⅛
14⅞	9½	17½	10	N.P.	Creole Syndicate	55,100	15¾	16¼	15⅛	16	0
3	.50	1⅞	.76	N.P.	Crown Central	5,400	1⅝	*1⅞	1½	1⅞	+ ⅜
12	4	30⅛	8⅛	N.P.	Darby Petroleum	20,500	27½	29	25⅜	29	+ 1
11½	4	13½	7⅞	....	do trust ctfs	.....	.....	.....	.....	.....	.....
2½	.74	22	1	N.P.	Derby Oil & Refining	200	22	*22	22	22	+ ¼
16⅜	4	10	7½	N.P.	do pfd	.....	.....	.....	.....	.....	.....
3¾	1	2	1¼	N.P.	Gibson Oil	19,500	1½	1⅝	1⅜	1⅝	+ ⅛
2	.40	.53	.15	N.P.	Gilliland ctfs	.....	.....	.....	.....	.....	.....
118	86¼	148½	101⅛	$ 25	Gulf Oil Corp	10,700	139¼	140	130⅛	134	— 6½
2½	.80	7⅞	1½	10	Intercontinent Pet	8,400	1⅞	*7¾	1½	1½	— ⅜
2¼	1⅛	3	1¼	N.P.	Kirby Petroleum	700	2¼	2⅜	2	2	— ½
10⅞	5⅛	9⅜	5½	N.P.	Leonard Oil & Dev	8,800	7⅛	8	7⅛	8	0
27½	20	32⅜	20	N.P.	Lion Oil & Refg	3,900	29⅝	31	28	30¾	+ 1¼
59⅜	37	57	49	$ 25	Lone Star Gas	1,200	51⅜	51⅝	50⅛	50⅛	— 1
2⅞	.80	1⅞	.91	1	Magdalena Synd	18,700	1⅜	1¾	1⅜	1⅝	— ⅛
21½	20⅞	22⅜	22⅛	N.P.	Manhattan Oil	.....	.....	.....	.....	.....	.....
52	12	45	37⅝	N.P.	Margay Oil	200	39½	39½	39½	39½	0
3	1½	40½	40½	$ 10	Mexican-Panuco	.....	.....	.....	.....	.....	.....
12⅛	5	8	4¼	N.P.	Mexico-Ohio Oil	200	6½	6¾	6½	6¾	+ ¼
1½	1	1½	.88	$ 1	Mountain & Gulf	400	.90	.90	†.88	.90	+.01
29¼	22¾	28⅝	23	10	Mountain Producers	4,900	23⅝	23⅞	23¼	23¾	+ ⅛
5⅞	4⅝	5⅝	4¾	5	New Bradford	1,700	5⅛	5⅛	5⅛	5⅛	0
6¼	4	5½	4	10	New England Fuel	300	5	5	4¾	4¾	+ ¼
16	9¼	11⅝	8⅛	1	New Mex. & Ariz	500	8⅝	9	8⅝	8¾	0
13⅞	9	15½	11½	25	New York Oil	.....	.....	.....	.....	.....	.....
12⅝	9½	13	10¾	N.P.	North Cent. Texas	1,800	13	13	12¼	12¼	— ¾
23⅞	21¼	.....	.....	.....	Okla. Nat. Gas ctfs.	.....	.....	.....	.....	.....	.....
9⅜	3¼	6	2⅜	N.P.	Pandem	2,300	3½	3⅜	3	3⅜	+ ⅛
12⅛	7	15¼	8½	N.P.	Panapec Oil	16,000	13⅝	13¾	13	13⅜	— ⅜
9	7⅝	11⅜	10⅜	$ 25	Paragon Refg	.....	.....	.....	.....	.....	.....
.37	.25	9	4	N.P.	Peer Oil Corp	.....	.....	.....	.....	.....	.....
13½	5⅜	7¾	5⅛	10	Pennok Oil	100	6	6	6	6	— ¾
....	....	4½	3⅛	5	Pittsburgh Oil & Gas	.....	.....	.....	.....	.....	.....
24⅜	7	14½	9	25	Red Bank Oil	.....	.....	.....	.....	.....	.....
15½	3½	12⅞	4½	N.P.	Reiter-Foster	9,100	9	9	8	8⅛	— ¾
28¾	15	31½	22	$ 25	Richfield Oil pfd	500	24	24⅞	24	24½	— ¼
7	4½	9¾	4⅝	N.P.	Ryan Consolidated	800	8⅜	8⅜	7⅜	7⅞	+ ½
8	5¼	7¼	6¼	$ 10	Salt Creek Cons	800	6½	6¾	6¼	6¾	0
35½	27¼	35	27½	10	Salt Creek Prod	8,000	28¼	*28¼	†27½	28	— ¾
7	1¾	3½	1	5	Savoy Oil	400	1¼	1¼	1¼	1¼	— 1
26½	17	22⅞	13	10	Tidal Osage	3,800	18¼	20⅞	18¼	19⅞	+ ⅞
23¾	15	21¼	13⅛	10	do non-voting	4,200	18¼	19⅞	18¼	19⅞	+ 2
92	63½	87	82½	100	Transcontinental pfd	300	82	85	82	83	— 2
23¼	7	47	18	10	Venezuela-Mexico	.....	.....	.....	.....	.....	.....
7⅜	4¼	6⅝	4⅞	5	Venezuelan Petrol	2,500	6⅛	6¼	6	6¼	0
32⅝	19½	25	18⅞	N.P.	Wilcox Oil & Gas	700	21	21⅜	20½	21⅛	— ⅛
8	4¾	8¼	5¾	$ 1	Woodley Petroleum	500	7⅞	7⅞	7½	7½	— ½
6	1¾	8⅜	2⅜	25	Y Oil & Gas (new)	9,500	6¾	*8¾	6¾	7½	+ 1

*New High †New Low xEx Dividend

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Beacon Cuts Price Of Warrant Stock

BOSTON, May 26.—Because of increases in amount of common stock outstanding and to certain options on the common stock given by the company, the prices at which detachable warrants attached to Beacon Oil Co. $3,000,000 10-year 6 per cent sinking fund debentures entitle holders to purchase common stock have been modified as follows:

Prior to July 1, 1928, 25 shares at $18.34 a share; after that date and prior to July 1, 1929, 24 shares at $19.01 a share; after that date and prior to Nov. 1, 1930, 22½ shares at $20.34 a share; and after that date and prior to Nov. 1, 1931, 22½ shares at $21.68 a share. At time of issuance of the debentures the respective prices were $20 prior to July 1, 1928, $21 prior to July 1, 1929, $23 prior to Nov. 1, 1930, and $25 prior to Nov. 1, 1931.

Gulf States Buys White Oak Refining Co.

TULSA, May 28.—The Gulf States Terminal & Transport Co., Inc., has taken over the White Oak Refining Co. through purchase of the stock of W. M. Welch and associates according to an announcement by Victor H. Smith. The company has a 2500-barrel skimming plant at Allen, connected with the Seminole field by a 4-inch line.

New officers of the White Oak are Victor H. Smith, president; Louis W. Pratt, vice president; and B. E. Connor, secretary. A. M. Smith, formerly of the Continental Oil Co. of Texas, and at one time with the Rock Island Refining Co., has been made superintendent of the plant.

Mr. Smith has announced also the removal of general offices of the Gulf States from Chicago to Tulsa. Branch offices will be maintained at New Orleans, Houston, Texas City, Galveston, Aransas Pass and Dallas. The Gulf States is active in the sale of bunker oil at various U. S. ports and in export and coastwise sale and movement of crude and refined oils.

Swan-Finch Resumes Dividends

CLEVELAND, May 26.—Swan-Finch Oil Corp., Buffalo, N. Y., a lubricating oil and grease manufacturer of the Standard Oil group, has declared a dividend of 30 cents a share payable June 30 to stock of June 1 record. This will be the first dividend the company has paid since Nov. 1, 1919.

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Single Copies 10¢
Subscription rate $3.50 per yr. in U.S.A. and Mexico (U.S. money)
$4 in Canada
$5 in foreign countries
Trade Mark reg. U.S. Pat. Off.
Members of Audit Bureau of Circulations and Associated Business Papers, Inc

NATIONAL PETROLEUM NEWS

Branch Offices:
LOS ANGELES
Petroleum Securities Building
TULSA.
World Building
NEW YORK
342 Madison Avenue
HOUSTON
612 West Building
CHICAGO
35 Wacker Drive

Published by the National Petroleum Publishing Co. MAIN OFFICE · 1213 W. 3rd St., Cleveland, Ohio. Copyrighted 1928

Vol. XX Cleveland, Ohio, May 30, 1928 No. 22

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